

DOST gives full scholarship to 10 outstanding Molecular Medicine students

Ware proud to have the 3rd batch of scholars for the MD-PhD Program in Molecular Medicine," said Department of Science and Technology (DOST) Undersecretary Fortunato de la Peña during the MD-PhD in Molecular Medicine Memorandum of Understanding (MOU) signing at the Hyatt Hotel Manila on 31 May 2012.

The MD-PhD program in Molecular Medicine is a scholarship grant under the DOST Accelerated Science and Technology Human Resource Development Program (ASTHRDP) which aims to develop human resource capacities to meet the biomedical research and development (R&D) needs of the country.

"Through this program, the country's global competitiveness and capability to innovate in health R&D will be improved. I commend our new batch of scholars who have chosen molecular medicine as their study course. You are exactly what the country needs right now, a doctor-scientist who will conduct biomedical research especially on emerging diseases," said Undersecretary de la Peña in his message.

Solifenacin succinate ... from pg 11

PGH), tested the efficacy and safety of solifenacin succinate to decrease period of bladder dysfunction for post hysterectomy patients. It aimed to provide a good way of minimizing the chances of UTI by decreasing the duration of catheter use through solifenacin succinate.

Solifenacin succinate is a common medication indicated for the treatment of various bladder and urination problems. Its efficacy in the management of bladder dysfunction of post-hysterectomy patients, however, has not yet been tested in any study until now. The researchers shared, *"This is the first study evaluating a possible additional clinical use of solifenacin succinate. The proposed usage of this drug in this study is novel."*

Thirty-six patients aged 19 years old and above who had radical hysterectomy at the UP-PGH were included in the study. The first group of 18 patients underwent the treatment with Solifenacin succinate. The other group were subjected to the usual clinical interventions without taking the medication. Return of bladder control in the patients was assessed after 72 hours, then weekly thereafter.

The scholars were Crizelda Jean Cruz, Sheriah Laine De Paz, Maria Isabel Idolor, Ana Joy Padua, Joyce Ann Robles, Ian Kim Tabios and Cherry Joy Tumampo from UP Diliman; Josept Mari Poblete and Jayson Trinchera of UP Manila and Angelo Sumalde of UP Los Baños.

All the scholars obtained at least 90% score in the National Medical Admission Test (NMAT) which is one of the requirements to qualify for the scholarship program. Seven of the scholars graduated Suma Cum Laude, six were Magna Cum Laude and three Cum Laude.

"They are the 'cream of the crop,' the best in terms of academic performances, and our future scientists and researchers that will lead our scientific communities in the development of effective drugs, vaccines, diagnostics and therapeutic agents for patient management and clinical care," Undersecretary de la Peña said. 📧 (Edmon B. Agron)

Interviews were also done to check the incidence of adverse reaction to the drug.

Use of indwelling catheter in patients who took Solifenacin succinate was shortened to an average of 8 days. This proves the efficacy of the medication in ensuring the rapid recovery of bladder control in post hysterectomy cases. The study also showed a correlation between the shortened duration of catheterization and minimizing chances of contracting UTI. Only about eight patients in the group who took the drug developed the infection.

The researchers were thrilled with finding an alternative way of addressing loss of bladder function and increase risk of UTI without compromising the chances of survival of the patients. They said, *"The result of this study is promising as this opens a new medical approach to the management of bladder dysfunction after radical hysterectomy. This approach provides an optimal balance between treatment efficacy without compromising the radicality of the procedure."* 📧 (Richmond Q. Acosta)

Increased health funding ... from pg 1

sector, the administrative costs involved in identifying, enrolling and collecting from them will most likely lead to a stagnant population coverage of 80% at most by 2015, with PhilHealth share of Total Health Expenditure at 20% at best," said Dr. Paterno

Another option to achieve UHC rapidly, according to Dr. Paterno, is for the premiums of the non-professional segment of the informal sector be subsidized by taxes.

"If we want to decrease out-of-pocket expenditure to 20 or 30% of Total Health Expenditure as protection against impoverishment from catastrophic health expenditures, Government share, both national and local, must increase to 50-60% of Total Health Expenditures because PhilHealth share would reach only 20% at best, based on the experience of middle income countries," explained Dr. Paterno.

Dr. Paterno reported that the costs for UHC in 2015 would range from P615 billion at 5% of projected Gross Domestic Product (GDP). P312 billion would be the minimum amount needed by the public health delivery system.

"With political will, we can raise revenues for UHC. With the appropriate tax reforms and increased collection efficiency, we can increase tax collection rate from its present 14% of Gross Domestic Product (GDP) to 17% of GDP which we were able to do in 1997; 3% of GDP differential translates to about P300B, enough to fund UHC," he said.

Dr. Paterno further stressed, *"Increasing the budget for health is the first step in achieving UHC. However, it is not sufficient. It is vital to have socio-economic development that will lead to growth for all to lessen health inequities and improve health outcomes."* 📧 (Rachel Ann Doreen D. Nadal)

Maintain heart-healthy ... from pg 2

In terms of waist measurement, Dr. Nicodemus revealed that the ideal waistline of Asian men should not exceed 35 inches. For Asian women, waistline should not exceed 31.5 inches.

For blood sugar levels, Dr. Nicodemus explained that the normal blood sugar level when fasting (no food intake within 8 hours) should not exceed 100mg/dL. A good blood sugar level, on the other hand, should be 140mg/dL or less two hours after meals.

"These are the important and heart-healthy numbers for the body that will make you win in health," stressed Dr. Nicodemus. 📧 (Rachel Ann Doreen D. Nadal)



Increased health funding and political will, key solutions to achieve UHC by 2015

Acknowledging that health is a basic human right and that there is a need to respond to increasing health inequities in the country, the Aquino administration has committed to achieve Universal Health Care (UHC) by 2015. Population coverage by 2015 will be obligatory and premiums will be subsidized by taxes from the National Government.

Dr. Ramon P. Paterno of UP Manila highlighted this commitment in his health policy paper presentation entitled "How Do We Finance Universal Health Care in the Philippines?" during the UP National Institutes of Health (NIH) Research Forum held last 10 May 2012. The paper examines policy options for financing the achievement of UHC by 2015.

In his paper, Dr. Paterno considered the Philippine Health Insurance Corporation (PhilHealth) as the key to health financing reforms.

"The informal sector is expected to contribute to the premiums of the Individually Paying Program, with partial subsidies from the LGU. The large size of the informal

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Senator Pia Cayetano calls for improvement of RP's water management system

In this year's celebration of International World Water Day, Senate Youth Committee Chair Senator Pia Cayetano reiterated a call to action on the Declaration of Commitment to Policy Action on Water and Sanitation.

"Water is essential to life. Without water, life is not possible," stressed Sen. Cayetano. Beyond meeting basic human needs, water is critical for sustainable development. It is a big requirement in food and energy production, industry function, and an integral part of transport systems.

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June is dengue awareness month



DOH raises dengue alert due to rainy season

As rainy season starts, dengue cases may start to soar," warned Department of Health (DOH) Assistant Secretary Enrique Tayag during the Colloquium on Current Status of Dengue in the Philippines in Muntinlupa City on 8 June 2012.

The DOH has already recorded a total of 30,336 dengue cases with 181 deaths from January to May 2012 alone. *"This is one percent higher compared to the 30,008 cases for the same period last year,"* said Dr. Tayag. The National Capital Region (NCR) tops the list with 7,355 dengue cases, followed by Region III (5,443) and Region IVA (4,321). In Metro Manila, Quezon City recorded 2,075 cases, followed by Manila (1,375), Caloocan (790), Parañaque (503) and Pasig City (463).

In his presentation, Dr. Tayag emphasized the need for the government to innovate to lower the threat of dengue cases in the country. *"What we are doing in the past may not be applicable today because even mosquitoes are now changing their nature. Some studies reported that dengue mosquitoes are now surviving in septic tanks, not just on clean stagnant waters,"* said Dr. Tayag.

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ASEAN Dengue Day celebration calls for unity towards a dengue-free community

In response to the increasing threat of dengue in the Asia Pacific region, member countries of the Association of Southeast Asian Nations (ASEAN) marked the second year celebration of the ASEAN Dengue Day with the theme *"ASEAN Unity for Dengue-Free Community"* on 15 June 2012.

While Myanmar hosted the regional celebration, other member countries observed ASEAN Dengue Day simultaneously to increase public awareness on dengue, mobilize resources for disease prevention and control and strengthen regional collaboration and responsibilities to control dengue across Asia.

In the Philippines, the ASEAN Dengue Day was held in San Fernando City, Pampanga. Department of Health (DOH) Secretary Enrique Ona led local chief executives, health workers, barangay officials and delegates from the local government units (LGUs) in Central Luzon, CALABARZON, MIMAROPA and Metro Manila in re-launching the dengue campaign dubbed as *"Aksiyon Barangay Kontra Dengue, Pagtibayin!"* *continue on p7*

Prevalence of hypertension among Filipinos increasing - PSH

21 percent of Filipino adults are hypertensive," said Dr. Dante Morales, President of the Philippine Society of Hypertension (PSH) during the National Hypertension Awareness celebration conducted at the Universidad De Manila on 19 May 2012.

Hypertension is considered as the biggest single risk factor for deaths worldwide. According to the World Health Organization (WHO), hypertension causes 7 million deaths every year while 1.5 billion people suffer due to its complications.

"Most of the time, hypertension has no symptoms," said Dr. Morales. "This makes the condition more dangerous. If remain untreated, the arteries and other vital organs in the body will be damaged," he added. Hypertension causes heart attack, stroke, heart failure, aneurysm or renal failure.

Lower salt intake reduces risk of hypertension

Salt intake should not exceed two grams per day," said Dr. Gabriel Jasul Jr., President of the Philippine Society of Endocrinology and Metabolism during the 3rd National Hypertension Awareness celebration held at Universidad de Manila on 19 May 2012.

Salt is composed of two minerals, sodium and chloride, which are both essential for blood electrolytes. They help regulate blood pressure and are critical for the functioning of the body's muscles and nerves.

However, "Excessive intake of salt may increase high blood pressure," said Dr. Jasul. "Because salt attracts water, the retention of too much water in the blood increased blood volume in the arteries. It also causes the swelling of the innermost lining of the arteries which narrows the diameter of the blood vessel leading to increased blood pressure."

In a survey conducted by the Food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST), a typical Filipino diet contains about 2 grams of



PCHRD staff during the DOST fun-run 2011

In the Philippines, heart attack is the most common cause of death among Filipinos. "This may be attributed to continuous neglect on the danger of hypertension and its complications," said Dr. Morales.

A study conducted by PSH found out that the prevalence of hypertension in the country is increasing. In 2003, data showed that 16 percent or approximately 7 million Filipino adults 20 years and above has hypertension. The incidence increased to 10 million or 21 percent of Filipino adults 20 years and above in 2008.

"Based on the data, we are expecting the incidence to increase more in the next survey in 2013," said Dr. Morales. He reminded the public to be aware of the food they eat and encouraged them to have at least 30 minutes exercise a day to reduce the risk of

sodium. However, with an addition of soy sauce, fish sauce (patis), fish paste (bagoong), mono sodium glutamate (vetsin) and other salty condiments during cooking, the sodium intake of an individual increases drastically to about 6000 milligrams or about 15 grams of salt.

In an interview, Dr. Imelda Agdeppa, nutritionist from FNRI-DOST, said that limiting salt intake is one of the most important steps that hypertensive people should take. She suggested strategies on how to avoid or limit intake of salt. "Avoid eating processed foods such as canned goods, ham, bacon, and dried fishes and increase consumption of natural foods like fresh fruits and vegetables. Also, avoid adding too much seasoning to your food like soy sauce, patis, bagoong and other condiments. Instead, use fresh herbs, lemon juice and vinegar."

Though salt contains important minerals that are good for the body, "We should lower the level of intake. Let's practise healthy eating patterns by reducing our salt consumption. The lower the salt intake, the better," reiterated Dr. Agdeppa. (Edmon B. Agron)

hypertension. "Because our lifestyle has direct impact on our health," added Dr. Morales.

Living a healthy lifestyle plays an important role in treating hypertension. "If you were diagnosed with high blood pressure, avoid smoking, minimize salt intake and alcohol consumption and a regular exercise are among the key strategies which may avoid, delay or reduce the need for medication," stressed Dr. Morales. (Edmon B. Agron)

Maintain heart-healthy numbers to prevent hypertension, says expert

According to Dr. Nemencio A. Nicodemus, Jr., Director of the Philippine Society of Endocrinology and Metabolism (PSEM), there are ideal heart-healthy numbers for the body to be maintained to prevent hypertension.

"Stage one hypertension occurs when an individual obtained a blood pressure of 140 over 90. Even if you are a teenager and you reached that certain level, you are already hypertensive. Normal blood pressure should be 120 over 70 and below," he explained.

In terms of cholesterol levels for the body, Dr. Nicodemus emphasized that too much "bad" cholesterol or Low-density lipoprotein (LDL) circulating in the blood can result to heart attack or stroke while low levels of "good" cholesterol or the High-density lipoprotein (HDL) increase the risk of heart disease.

"For a hypertensive person, bad cholesterol level should not exceed 100mg/dL. In good cholesterol, it should be 50mg/dL and above for women while for men, it should be 40mg/dL and above," he said.

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Ostrich eggshell may prevent collapse of gum line after tooth extraction, study says

Dental implants, fixed bridges and dentures are modern day solutions to missing teeth. For the success and natural looking appearance of these procedures, keeping the tooth socket firm and preserved after tooth extraction is a must.

A study done by a group of researchers from Centro Escolar University (CEU) revealed that ostrich eggshell in its pure form can be used as

a graft support in preserving the alveolar socket, the bone that anchors the tooth, after tooth extraction.

The study, entitled, *Ostrich (Struthio camelus) Eggshell as a Xenograft for Immediate Alveolar Socket Preservation*, was conducted to produce graft material out of ostrich eggshell for socket preservation procedure. The processed ostrich eggshell will act as a supporting structure like a scaffold that limits early collapse of socket walls. By saving the alveolar bone, tooth

Study verifies coronary angioplasty's effectiveness as alternative to heart bypass

The heart's left ventricle (LV) has to receive a steady supply of blood through the coronary arteries. Conditions that block the passage of blood through the coronary arteries can seriously result to the deterioration of LV function of the heart. Dr. Michael Ferrer and Dr. Alexander Ang of the Philippine Heart Center warned, "Severe coronary artery disease (CAD) in patient with markedly depressed LV function is associated with poor prognosis."

While coronary artery bypass graft surgery (CABG) has been traditionally performed to address cases of CAD with depressed LV function, many doctors see percutaneous coronary intervention (PCI), popularly known as *coronary angioplasty*, as a good alternative.

Dr. Ang and Dr. Ferrer conducted a study, entitled, *Comparison of Outcomes in Patients with Depressed Left Ventricular Functions After*

Complete Revascularization: Coronary Artery Bypass Graft Surgery vs. Percutaneous Coronary Intervention, in order to compare the clinical outcomes of CAD patients after undergoing either CABG or PCI. The researchers shared, "Even though coronary angioplasty has been offered as an alternative to bypass surgery, the role of PCI has not been well defined."

Forty post-PCI and forty post-CABG patients were included in the study. The researchers surveyed the incidence of major adverse cardiac events (MACE) and checked the decline in the patients' heart's fitness based on the Functional Classification (FC) and their anginal status one year after undergoing the procedures.

The study reported neither instances of heart attacks nor any need to repeat the procedure from either of each group. The results, however, showed that more post-PCI patients experience

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Solifenacin succinate shortens bladder dysfunction after hysterectomy

Radical hysterectomy is the recommended treatment for cervical and endometrial cancer. While it increases the chance of survival of the patients, the procedure usually causes many adverse effects. One of which is loss of bladder control.

The removal of the entire upper part of the vagina can destroy the autonomic nerve supply to control the bladder. Doctors usually manage the resulting bladder dysfunction and facilitate urination by inserting indwelling urinary catheter. However, since the loss of bladder function usually takes an average of 21 days to subside, risks of contracting urinary tract

infection (UTI) increases.

Some experts suggested leaving the vagina intact during hysterectomy to prevent bladder dysfunction. However, many fear that doing so can compromise the chances of survival of the patients. What is needed is an alternative management that will minimize UTI without putting the survival of the patients in jeopardy.

The study, entitled, *The Role of Solifenacin Succinate in the Management of Bladder Dysfunction in Radical Hysterectomy Patients*, by researchers from the University of the Philippines – Philippine General Hospital (UP-

continue on p12

restoration procedures can be done successfully. Without solid bone foundation, inserted implants may be unstable, and a collapsed ridge clearly renders a poor aesthetic appearance.

Results of the study showed that the use of ostrich eggshell as graft did not cause inflammatory reaction. The graft was able to support the attachment of new osteoblasts or bone cells, providing an interconnected structure through which new cells can migrate and new vessels can form.

Researchers, Patricia Diana Suiza, Mostafa Mehrafsha and Beverly Go encouraged other researchers to explore the potential of ostrich eggshell as graft. They said, "We hope that this research opens opportunities for other researchers to further validate what we discovered. Consequently, this new discovery can help the field of dentistry in performing their work." (Ana Ciaren P. Hipolito)

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Atis fruits

Atis, Akapulko and Kapal-kapal, plants with potential anti-cancer compounds

In the management of cancer, there is chemotherapy which uses natural products or drugs that kill cancer cells. And in our study, we are trying to discover possible chemotherapeutic properties derived from plant sources," said Dr. Sonia D. Jacinto, Anticancer Natural Products Professor of the University of the Philippines Diliman (UPD).

The research conducted by the group of Dr. Jacinto entitled "Philippine Plants Showing Cytotoxic Activity to Selected Human Cancer Cell Lines" aims to isolate the compounds that are responsible for the cancer-killing action of the plant extracts to enable development of anti-cancer drugs.

"We grow a lot of cancer cells and place the plant extracts in it to observe if the cancer cells can grow. If they grow, then the study is unsuccessful. If it dies, it is a good sign that we can proceed to the next stage," explained Dr. Jacinto.

Among the interesting findings obtained from their study was from the plant *Annona squamosa*, more commonly known as "Atis." According to Dr. Jacinto, *Annona squamosa* is a close relative of *Annona muricata* or "Guyabano" which is rich in Murihexocin C, compound active as anti-cancer agent.

Another plant which showed potential was Akapulko (*Cassia alata*). Akapulko is a herbal medicine that is known to have anti-microbial and anti-fungal properties. Dr. Jacinto's group

discovered that Akapulko also has cytotoxic activity against some cancer cell lines.

"We have isolated a mixture of polyunsaturated fatty acid esters. The isolate may have potential for development as cancer chemotherapeutic agents," said Dr. Jacinto.

Dr. Jacinto's group also discovered cytotoxicity or cell-killing properties from *Calotropis gigantea* or "Kapal-kapal." Results showed that the compounds were extremely toxic to the human cancer cell lines such as colon carcinoma, lung non-small cell adenocarcinoma and liver hepatocarcinoma.

Kapal-kapal is cultivated as an ornamental and medicinal plant in the Philippines. Based on Dr. Jacinto's research, the leaves of the plant can be applied as a dry fomentation for abdominal pains. Ethanol extract of Kapal-kapal roots has also shown significant inhibitory effects against chronic myelogenous leukemia and human gastric cancer cell lines.

According to Dr. Jacinto, there are still other plant species that can be studied further for their cancer-killing properties. Dr. Jacinto encouraged young researchers to conduct researches on medicinal plants to contribute in the treatment of cancer.

"This is the line of work that we do. You can perhaps do something like this. You can use this as a jump start of your researches," said Dr. Jacinto. (Rachel Ann Doreen D. Nadal)

interpretations were later compared to check which group of specialists made the highest rate of agreement in confirming TB. The resulting comparison showed that the group who read the CT scan results were more likely to give and agree on similar interpretations than the group who read the chest X-rays. The researchers concluded, "The overall positive predictive value for diagnosis TB disease in children using chest X-ray was only 59% compared to chest CT scan which was 98%." (Richmond Q. Acosta)

CT scan is better ... from pg 5

read by three radiologists, while three CT scan readers read the CT scan results. The researchers shared, "Chest radiographs were interpreted by three radiologists blinded to the clinical diagnosis of the patients and chest CT scan were read by three readers blinded to both the clinical diagnosis and results of previous chest radiographs." All CT scan readers and radiologists were asked to write their interpretations separately. The

Study reveals increasing ... from pg 9

To date, there is no data in the Philippines that shows the percentage of "screenable" Filipino males who undergo PSA testing. However, Dr. Raymundo cited a data in the US which shows that 46% of immigrant Filipino-Americans underwent PSA screening.

"Lower economic capabilities of many Asian countries preclude widespread use of PSA screening and this has contributed to the low detection rate in Filipinos," said Dr. Raymundo.

To counteract increase risk of prostate cancer, Dr. Raymundo encouraged the consumption of

"Lower economic capabilities of many Asian countries preclude widespread use of PSA screening and this has contributed to the low detection rate in Filipinos"

phyto-estrogen-rich foods which exerts powerful anti-androgenic effects. Anti-androgen is a substance that blocks the action of androgens, which are hormones promoting the development of prostate cancer. Green tea and soy-derived foods such as tofu and dairy products are found to be rich in phyto-estrogen.

"Filipinos are not fond of drinking tea and eating tofu unlike other Asian countries. If we educate our patients, perhaps, we can make a difference in the future in the incidence of prostate cancer," stressed Dr. Raymundo. (Rachel Ann Doreen D. Nadal)

Study verifies coronary ... from pg 11

health improvement than post-CABG patients one year after the procedure. About 84% of the post-PCI cases improved their anginal status as compared to the 80% in the post-CABG group. Only 25% of the post-CABG patients got better classification in their FC, a small number compared to the 40% in the post-PCI group. CABG group even showed higher number of deaths a year after the procedure, with 13% of the patients dying, compared to the 10% in the post-PCI group. The researchers concluded that PCI is an effective alternative for people who are suffering of CAD with depressed LV. The researchers said, "These data suggest that PCI may be an effective treatment option for CAD patients with LV dysfunctions." (Richmond Q. Acosta)



Poor water quality, major cause of water-related diseases

Water quality, long regarded as the prime indicator of health and well-being, plays a crucial role in determining the cause and transmission of a disease," said Dr. Raul V. Destura, Director of the Institute of Biotechnology and Molecular Biology, National Institutes of Health during his presentation in the Roundtable Discussion on Water Borne Diseases at the Hyatt Hotel and Casino, Manila last May 10, 2012.

In the developing world, inadequate water supply, sanitation facilities, and poor hygiene are the prime causes of widespread and serious health problems. The World Health Organization (WHO) estimates that one billion people do not have access to safe and drinking water while 2.9 billion do not have adequate sanitation facilities. These result to three million water-related deaths per year, majority of whom are children.

Senator Pia Cayetano ... from p 1

According to Sen. Cayetano, the Philippines has abundant water resource. However, ironically, 250 out of 1600 communities in the country do not have access to clean water.

The United Nations Children's Fund (UNICEF) reported that safe drinking water is not accessible to 17 million Filipinos and potable water is limited to 15 percent of the rural communities in the country due to meager income.

"This year's International World Water Day celebration theme is Water and Food Security. Its aim is to produce more food using less water, reduce food wastage and losses, and move towards more sustainable diets," informed Sen. Cayetano.

"The water-related infections of man are extremely numerous and diverse. Disease transmission via water is categorized into waterborne, water-washed, water-based and water-vectored"

"The water-related infections of man are extremely numerous and diverse. Disease transmission via water is categorized into waterborne, water-washed, water-based and water-vectored," explained Dr. Destura. Waterborne diseases are outbreaks related to water quality. "Pathogens are transmitted through contaminated water sources. These pathogens live in water and human generally needs a low dose of them to become infected," said Dr. Destura. Examples of waterborne diseases are typhoid and cholera.

Where water is limited it is challenging to control the other routes of pathogen transmission. "Water-washed diseases generally occur when there is not enough water available and, therefore, personal hygiene is compromised," said Dr. Destura.

Water-based diseases, on the other hand, occur when a pathogen is transmitted through a host that lives in the water. "Example is schistosomiasis, a long, thin worm hosted by snails during part of its development. It penetrates human skin once a human come in contact with water," explained Dr. Destura.

"Pathogens are transmitted through contaminated water sources. These pathogens live in water and human generally needs a low dose of them to become infected,"

Malaria, yellow fever and dengue are examples of water-vectored diseases. These are infections spread by insects that breed in or bite near water.

The improvement of access to water is a crucial element in the fight against water-related diseases. "Let's develop and promote household water treatment methods, disseminate information on proper hygiene, improve access to water-related health information, upgrade sanitation facilities and provide capacity building for outbreaks investigations, environment sampling methods and disinfection and filtration systems," stressed Dr. Destura. (Ana Ciaren P. Hipolito)

overlapping functions of agencies in charge of water resources for strict implementation of existing legislations. She added, "We should allocate sustainable budget to support pending legislations in advocating improvements in this sector and ensure public accountability of water service providers. We should tap and access available technologies that would help us improve our water management system."

Importantly, Sen. Cayetano called for individual efforts to support this cause. She said, "We should try to conserve water in any small way we can. We should maximize the use of water by reusing it in different ways – what you used to wash your clothes can be used to clean the bathroom or flush your toilet." (Ana Ciaren P. Hipolito)

Hand washing saves lives and reduces transfer of disease - WHO

Germs are everywhere. We acquire germs by touching contaminated objects or surfaces and transmit it through our hands.

According to the United States Agency for International Development (USAID), over 1.5 million children under five years old die each year of diarrhea as a result of poor hand washing. Aside from diarrhea, 80% of all infectious diseases are transmitted from person to person due to poor hand hygiene.

The problem on hand washing is not just prevalent among children in the communities but also among health practitioners. This is shown by the increasing incidence of health care associated infections (HCAI) in health facilities and hospitals worldwide.

A study conducted by the World Health Organization (WHO) revealed that out of every 100 hospitalized patients, 7 patients in developed countries and 15 patients in developing countries will acquire HCAI due to

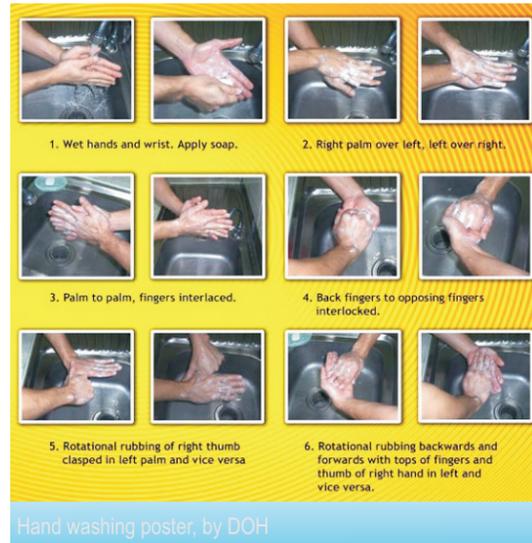
“over 1.5 million children under five years old die each year of diarrhea as a result of poor hand washing”

poor hand washing practices. Patients may acquire HCAI during the process of care or while receiving treatment for medical or surgical conditions.

Though the global burden for HCAI remains unknown, studies affirmed that each year, hundreds of millions of patients are affected. *“HCAI is a cross-cutting problem that no institution or country can claim to have solved yet,”* said WHO.

To combat HCAI, the WHO spearheaded *“Save Lives: Clean your Hands,”* a call to action campaign last 5 May 2012. The campaign aims to galvanize action at the point of care and demonstrate that hand hygiene is the entrance door for reducing health care-associated infection and other communicable diseases in hospitals and in the communities.

On proper hand washing, the WHO recommended *“hand washing moments”* for health care workers. These include hand washing before touching a patient, before cleaning/aseptic procedures, after body fluid exposure/risk and after touching a patient and patient's surroundings.



“While hand washing is considered the most cost-effective intervention to prevent diarrheal-related deaths, pneumonia and other infectious diseases, information education and communication (IEC) campaign on proper hand washing is also an important factor to increase the people’s awareness on hand washing,” said WHO.

The *“Save Lives: Clean your Hands”* campaign is participated by 15,000 health-care facilities from 156 countries or a total of 10 million health care workers to implement hand hygiene best practices and to combat the persistent public health hazard of HCAI. 📍 (Edmon B. Agron)

In 2008, WHO has introduced a package of tobacco control measures to further counter the tobacco epidemic and to help countries to implement the WHO Framework Convention on Tobacco Control. It is an evidence-based treaty that reaffirms the right of people to the highest standard of health.

At present, WHO continually urge countries and national governments to strictly monitor tobacco companies and implement policies that will protect public health from tobacco industry interests.

“In recent years, multinational tobacco companies have been shamelessly fuelling a series of legal actions against governments that have been at the forefront of the war against tobacco. We must now stand together with these governments that have had the courage to do the right thing to protect their citizens,” stressed Dr. Margaret Chan, Director General of WHO. 📍 (Rachel Ann Doreen D. Nadal)

One person dies every six seconds due to smoking - WHO

Tobacco epidemic is one of the biggest public health threats globally. According to the World Health Organization (WHO), it kills nearly six million people each year. Most of them are users or ex-users of tobacco and more than 600,000 of them die due to exposure to second-hand smoke.

The consequences of poisoning from tobacco smoking happen gradually. Over the long term, smoking leads people to develop health problems like heart disease, stroke, emphysema (breakdown of lung tissue), and many types of cancer.

“Smoking kills about 5.4 million people each year — one every six seconds — from lung cancer, heart disease or other illness directly linked to tobacco use,” said Dr Douglas Bettcher, Director of WHO’s Tobacco Free

Initiative Department.

WHO revealed that there are more than 4000 chemicals in tobacco smoke, of which at least 250 are known to be harmful and more than 50 are known to cause cancer. The smoke from tobacco elicits carcinogenic effects on the tissues of the body that are exposed to the smoke.

Most adult smokers started their smoking habit before the age of 20. Studies showed that early signs of heart diseases and other illness can be found in adolescents who smoke. Long-term health consequences of youth smoking are reinforced by the fact that most young people who smoke regularly continue to smoke throughout adulthood.



MMHRDC research forum addresses research gaps in cancer

Last May 04, 2012, the Metro Manila Health Research and Development Consortium (MMHRDC), in collaboration with the Pamantasan ng Lungsod ng Maynila (PLM), in celebration of the Cancer Awareness Month, held its 2nd quarter research forum with the theme *“In depth with the BIG C: A Research Forum on Cancer”* at the Gusaling Atienza, Pamantasan ng Lungsod ng Maynila.

The forum showcased research works of experts from the 25 member-institutions of the Consortium to provide a venue for collaboration among stakeholders to address research gaps on cancer.

Dr. Sonia Jacinto, Anticancer Natural Products Professor of the University of the Philippines-Diliman (UPD) presented her research *“Philippine Plants Showing Cytotoxic Activity to Selected Human Cancer Cell Lines.”* The research studied the cytotoxic property of Philippine plant extracts on human cancer cell lines to

determine their potential as chemotherapeutic agents against cancer.

“We have tested a number of crude extracts from different plant leaves and found some with potent cytotoxic property against human cancer cell lines. One plant that has yielded cytotoxic compounds is Calotropis gigantea or kapal-kapal in Tagalog,” said Dr. Jacinto.

Dr. Maria Luisa Enriquez, Director of the Center for Natural Sciences and Ecological Research of the De La Salle University Manila tackled *“Intratumoral heterogeneity of KRAS and P53 mutations Among Filipinos with Colorectal Cancer.”* Her research aimed to detect and characterize the gene mutations involved with colorectal cancer patients.

“Genes make proteins. Each protein has a function. If the genes are mutated, you will have an effective protein. If the protein is defective, it cannot function well. If it cannot

Study reveals increasing incidence of prostate cancer in developing countries

Prostate cancer is the third most common male cancer in the entire world and half a million new cases continues to be diagnosed every year. *There is an increasing incidence in both developed and developing countries,”* said Dr. Eliza Raymundo, Clinical Associate Professor of University of the Philippines Manila of the Philippine General Hospital (UPM-PGH) during the Metro Manila Health Research and Development Consortium (MMHRDC) research forum last May 04, 2012 at the Pamantasan ng Lungsod ng Maynila.

Prostate cancer is a form of cancer that develops in the prostate, a gland in the male

reproductive system. It may cause pain, difficulty in urinating and problems during sexual intercourse, or erectile dysfunction. Other symptoms can potentially develop during later stages of the disease.

In her study, *“Prostate Cancer and the Filipino: Risk Assessment and the Screening Controversy,”* Dr. Raymundo revealed that the incidence rate of prostate cancer in Asians is much lower compared to Caucasians. However, the low incidence is still alarming because when patients in Asian countries are diagnosed, it is already in the late stage, more commonly

function well, one of the outcomes is cancer,” explained Dr. Enriquez.

Meanwhile, Dr. Eliza Raymundo, Clinical Associate Professor of University of the Philippines Manila of the Philippine General Hospital (UPM-PGH) discussed her study *“Prostate Cancer and the Filipino: Risk Assessment and the Screening Controversy.”* Results revealed that Filipinos, among Asians, may have a high risk of developing and dying from prostate cancer (CaP) and may have similar risk of death from CaP as compared to Caucasians.

According to Dr. Raymundo, *“Low detection rate in Filipinos were brought by the low prevalence of using prostate-specific antigen (PSA), a screening test to detect prostate cancer and also because of low economic capability of many Asian countries to avail the test.”*

Dr. Raymundo also identified the barriers in the early detection and treatment of cancer among Filipinos. *“Filipinos were not that aware of the need for cancer screening. They are driven by fear in terms of cancer diagnosis and cost of treatment.”*

Despite the barriers, Mr. Romeo Marcaida, Head of the Patient Navigation Program of the Philippine Cancer Society (PCSI), is confident that the country can provide quality healthcare to Filipino cancer patients.

“There are a lot of barriers to healthcare, especially for Filipino cancer patients. This is one of the most expensive diseases in the country. We are trying to break barriers, by providing diagnostic services, quality facilities for patients and assistance on how to source out money to avail the drugs needed.” he said. 📍 (Rachel Ann Doreen D. Nadal)

at stage 3 and stage 4 prostate cancer.

For early detection and treatment, the U.S. Food and Drug Administration (FDA) approved the use of prostate-specific antigen (PSA) in cancer screening. Doctors recommend yearly screening for men over age 50 and those who have a family history of the disease.

In the Philippines, annual screening with digital rectal exam (DRE) and PSA was recommended by the Philippine Urological Association. Together, these tests help doctors detect prostate cancer in men who have no symptoms of the disease.

Researchers verify safety and effectiveness of back massage for pregnant women

Traditionally, back massage is given to any person who complains of muscle pain. Even pregnant women are known to seek out massage therapists to soothe the back pain that commonly plague them.

Researchers at the Angeles University Foundation Medical Center (AUFMC) looked for evidence of the safety and effectiveness of back massage in reducing back pain for pregnant women in the research entitled, *Maternal and Fetal Effects of a Back Massage in the Third Trimester of Pregnancy*.

The researchers, Dr. Gina G. Masangcay and Dr. Eileen Co-Sy, shared that back pain is caused by the stress on muscles and joints when women lean further backward to maintain their balance during pregnancy. They explained, *“Back pain is brought about when the center of gravity is gradually shifted forward due to the growing abdomen. Thus, this causes the lumbar curvature to increase, affecting the muscles and joints.”*

The study was conducted to 100 women in their third trimester of pregnancy. Non-stress tests (NST) were done before and after the application of back massage to monitor changes in the uterine contraction, fetal heart rate and movement. Questionnaires were given to the mothers to assess their back pain before and after the therapy.

Results of the study showed that back massage increases fetal movement but does not affect the fetal heart rate and uterine contraction suggesting its safety for the fetus. In terms of the back pain experienced by the mothers, all the pregnant women responded positively on the questionnaire. The researchers concluded that back massage is a safe and effective method in reducing back pain during pregnancy. The researchers said, *“Back massage therapy reduces levels of back pain in pregnant women and has no adverse effect on fetal wellbeing.”* 📍 (Richmond Q. Acosta)

Study confirms breast milk's antimicrobial property

Breast milk transfers immunity from the mother to the baby. Through the passive immunity that the breast milk provides, the infant's immune system can keep harmful pathogens in check. But what baffles two scientists, Dr. Jennifer Lou L. Lorico and Dr. Ma. Lucila Perez of the Ospital ng Makati, is if breast milk can still kill pathogens if stored in an unsterile container.

To test if storing breast milk in unsterile container affects its potency against harmful microorganisms, the two scientists conducted the study entitled, *Effect of Storage Process on the Bacterial Growth-Inhibiting Activity of Expressed Human Breast Milk on Common Neonatal Pathogens, Staphylococcus aureus, Escherichia coli and Klebsiella pneumoniae*. The scientists explained, *“The aim of the study was to describe the effects of storage process on the bacterial growth-inhibiting activity of expressed human breast milk on common neonatal pathogens.”*

Uncontaminated samples of breast milk from 15 healthy mothers who were not taking any

medication were collected and stored in petri dishes that were contaminated with *Staphylococcus aureus*, *Escherichia coli* and *Klebsiella pneumoniae*. The first five samples were left to stand in a room temperature for four hours. The second batch was kept in freezer for 24 hours. The last five samples were frozen for 72 hours.

Although the batch of samples that were frozen for 72 hours showed reduced effect on inhibiting the growth of *E. coli*, the results of the study showed that breast milk can effectively stop the growth of harmful pathogens. The study concluded, *“This study supports that breast milk has bacterial inhibiting property among neonatal pathogens. However, the bacteriostatic property of breast milk started to diminish after being frozen for 72 hours, but still exerted its inhibiting property.”*

The researchers challenged other researchers to continue the study to pinpoint the exact components of breast milk that kill the harmful neonatal pathogens in order to

Study says complications may reoccur years after repair of congenital heart defects

The cohort study, entitled, *Late Complications Following Tetralogy of Fallot Repair: A 5 -10 year review*, showed that long-term complications commonly occur years after successful repair of Tetralogy of Fallot (TOF) in patients.

TOF is a condition wherein a patient is born with four or three congenital heart defects including pulmonary infundibular stenosis, overriding aorta, ventricular septal defect (VSD) and right ventricular hypertrophy. To treat the condition, each defect must be addressed accordingly. An open-heart surgery, for example, is initially conducted to relieve stenosis and repair the VSD. Other surgical procedures are done afterwards to correct the other defects. Unfortunately, a patient's plight may not end after going through the series of corrective procedures as complications may still arise in the future.

Results of the study showed that several patients who had undergone TOF operation before have to be reoperated. Seven years after the TOF repair, several patients underwent reconstructive surgery to manage the right ventricular outflow of the heart. Nine patients had percutaneous pulmonary balloon valvuloplasty due to VSD leakage. Two developed severe pulmonary stenosis and must underwent infundibulectomy. Two more had pulmonary valve replacement while one patient still awaits surgery for similar procedure.

The researchers behind the study, Dr. Suzette Perfecto, Dr. Ma Lourdes Casas and Dr. Corazon Estevanez of the Philippine Heart Center, cautioned that arising complications will get worse if not addressed promptly. They advised, *“Complications may progress and lead to right ventricular failure and dilatation. Long term follow up in patients after TOF correction is essential to monitor complications and provide intervention as need arises.”* 📍 (Richmond Q. Acosta)

understand more how its germicidal property diminishes when stored in a container. They said, *“We recommend that further studies be pursued in order to determine the specific antimicrobial components of breast milk that were altered during the storage process, which in turn compromises its inhibitory property.”* 📍 (Richmond Q. Acosta)

WHO pushes for inclusion of HPV vaccination in national immunization programs

The World Health Organization (WHO) reported that 80 percent of women in developing countries are affected with cervical cancer. The disease is often prevalent in countries where cervical cancer screening and treatment systems are weak or non-existent.

The provision of human papillomavirus (HPV) vaccine is regarded as an important initiative to significantly reduce the global burden of cervical cancer. For decades, the widespread use of HPV vaccine alone has been proven to reduce cervical cancer deaths by 50 percent. Depending on immunization coverage and additional cross-protection against certain

CT scan is better than X-ray in confirming pediatric TB, study says

A study done by a group of researchers at the Philippine Heart Center revealed that diagnosis of pediatric tuberculosis (TB) is better with results from CT scan than with chest X-ray.

The study, entitled, *The Agreement between the Chest CT scan and Chest X-ray Findings Among Tuberculin Positive Filipino Children – A Prospective Study*, was conducted on 98 children who showed positive tuberculin test (a test to confirm exposure to the *Mycobacterium tuberculosis*) with symptoms such as cough, weight loss and other signs commonly attributed to TB.

Chest X-ray and CT scan are commonly used to confirm TB infection in suspected TB cases in many hospitals. The group of researchers in the Philippine Heart Center conducted the study to see which one is more accurate in confirming TB infection in children.

The chest X-rays of the patients were first

continue on p10

types of HPV, an even higher rate of 71 percent decrease in deaths can be achieved worldwide.

The decrease in the number of deaths brought by vaccination led the WHO to recommend the inclusion of routine HPV vaccination in national immunization programs with the following key considerations: 1) prevention of cervical cancer or other HPV-related diseases, or both, constitutes a public health priority; 2) vaccine introduction is programmatically feasible; 3) sustainable financing can be secured; 4) cost-effectiveness of vaccination strategies in the country or region is considered; and 5) HPV vaccination is targeted to adolescent girls prior to sexual debut.

From the public health perspective, the most efficient population target for HPV vaccination is young, adolescent girls. *“The primary target population for vaccination should be selected based on the age of initiation of sexual activity and the feasibility of reaching young, adolescent girls through schools, health-care facilities or community-based settings. The*

primary target population is girls within the age range of 9-10 years through 13 years,” said the WHO.

In low-income countries, the WHO does not recommend that sexually active women be vaccinated since both vaccines show much lower effectiveness after HPV infection. Vaccinating boys is also deemed not as cost-effective as focusing on adolescent girls. It is recommended to focus resources on reaching more girls for HPV vaccination rather than split resources between girls and boys. *“Though boys can become infected with HPV and other HPV-associated disease such as penile, anal and oral cancers or genital warts, only seven percent of cancers occur in men.”*

Although the HPV vaccine is expected to significantly reduce the incidence of cervical cancer, it will not replace cervical cancer screening. *“A comprehensive approach which uses vaccination in partnership with screening will maximize effectiveness,”* said WHO. 📍 (Ana Ciaren P. Hipolito)

United Nations Foundation seeks more funding to hit 2015 measles, rubella target

Measles deaths have decreased dramatically by 74 percent from 535, 300 in 2000 to just over 139,000 in 2010, but alongside that good news is the not so good news. The Measles and Rubella (MR) Initiative set a target to reduce deaths by 95 percent, but the plan to reach each child is short of cash.

“An additional US\$ 112 million is needed to achieve the global measles and rubella goals for 2015. We need significant commitments from governments and the private sector if we are going to stop measles and rubella, as well as the support of individuals worldwide, because a small donation from the public can go a long way and help save many lives,” declared Kathy Calvin, Chief Executive Officer of the United Nations Foundation.

The Global Alliance for Vaccines and Immunization (GAVI) pledged to continue its partnership with the MR Initiative who supports developing countries in controlling and eliminating the diseases. *“We are delighted to strengthen our partnership with the MR Initiative, which has done great work to reduce measles and infections and reduce mortality,”* said Dr. Seth Berkley, GAVI Chief

“An additional US\$ 112 million is needed to achieve the global measles and rubella goals for 2015.

We need significant commitments from governments and the private sector” - Calvin

Executive Officer. He announced, *“With GAVI's US\$605 million investment for both the combined MR and second dose vaccines in developing countries, this is a historic moment for the reduction, and hopefully, eventual elimination of both diseases.”*

Aside from monetary support from GAVI, the American Red Cross promised to leverage the capacity of its partners in the Red Cross, Red Crescent network, and their volunteer network to combat measles and rubella. *“By working closely with these volunteers, trusted neighbors and community members, to literally go door-to-door, explaining the importance of receiving routine immunizations and participating in campaigns, we can continue to fight these deadly diseases,”* said David Meltzer, Senior Vice President of the American Red Cross' International Services. 📍 (Ana Ciaren P. Hipolito)

Government intensifies anti-dengue campaign in schools in time with the opening of classes

Children in schools are the most vulnerable to get dengue," said Dr. Manuel Mapue, Department of Health (DOH) Regional Medical Dengue Coordinator for Metro Manila during the Ovicidal/Larvicidal (OL) Mosquito Trap Training held at the Caloocan National High School, Caloocan City on 29 May 2012.

"This is the reason why the Department of Health (DOH) and Department of Science and Technology (DOST) launched the School-based OL Trap Program to reduce the number of mosquito populations and lower the dengue incidents in schools. In this program, the role of teachers is very crucial," said Dr. Mapue.



Valenzuela school teachers receive DOST OL trap kits

Started last 28 May 2012, the DOST will hold a series of training for all teacher representatives from elementary and high schools in Metro Manila until 11 June 2012. "These teacher representatives will be the dengue teacher coordinators for the Program," said Engineer Romelen Tresvales, Assistant National Coordinator for School-Based OL trap Program. "They will manage and monitor the OL mosquito trap that will be installed in schools," she added.

Aside from basic knowledge on how to manage OL mosquito traps, teachers will be trained to collect data. "These will be the basis for the local government units (LGUs) and the Department of Health (DOH) to perform

appropriate actions, whenever possible, before an outbreak arises," explained Engr. Tresvales.

At the moment, more than 400 teacher coordinators were already trained from Caloocan, Malabon, Navotas, Valenzuela, Manila, Muntinlupa, Taguig, Parañaque, Las Piñas and Quezon City. The next training

will be conducted on June 6, 7, and 11 2012 for San Juan, Mandaluyong, Pasay, Makati, Pasig and Marikina to complete the roll of orientations for dengue coordinators in the National Capital Region (NCR).

Currently, the Program prioritizes the 31 identified dengue hotspot provinces where 435,000 OL mosquito trap kits will be distributed. For Metro Manila, 50,350 kits will be distributed and will be installed in schools starting 13 June 2012.

The School-based OL trap Program is a collaborative project of the DOST, DOH, Department of Education (DepEd) and the Department of Interior and Local Government (DILG). (Edmon B. Agron)



The 2nd ASEAN Dengue Day held in San Fernando City, Pampanga

DOH launches 'SMS blast' for dengue warning and real-time reporting in Pampanga

Department of Health (DOH) Secretary Enrique Ona introduced a new strategy on 'specific targeting' of dengue using information technology during the ASEAN Dengue Day celebration held in San Fernando City, Pampanga on 15 June 2012.

Specific targeting is the immediate response of the authorities to conduct control measures in a particular community whenever suspected dengue cases are reported. "What we added here is the use of short messaging system (SMS) or text that would allow real-time reporting of dengue cases," said Secretary Ona.

Through the system, rural health units and hospitals will immediately report suspected dengue cases to the dengue coordinators who would forward the information to the dengue monitoring hub managed by the Philippine Information Agency (PIA). The PIA will then execute a 'text blast' to warn the dengue affected areas and immediate vicinities while barangay health teams will conduct investigations.

According to PIA Regional Director Robert Baldago, "PIA has collaborated with the National Telecommunications Commission

(NTC), Smart Communications and Globe Telecom to allocate a total of 100,000 monthly free text messages per PIA regional office which will be used in sending free information on dengue prevention and control. Text messages will be sent directly to various stakeholders, partners and barangay officials of the affected communities."

Aside from information on dengue, Director Baldago shared that the 'SMS blast' will also be used to send free public advisories on other health risks and calamity warnings such as flood and typhoon notices to recipients segmented by provinces, sectors, occupations and genders.

"The 'SMS Blast' for dengue warning is pilot-tested in Pampanga and will eventually be implemented in other provinces in the country," said Secretary Ona. (Edmon B. Agron)

100% DEET in mosquito repellent lotion may induce allergies, study says

Plenty of mosquito repellents line the shelves of drugstores and supermarkets, but they are not all created alike. The majority of available mosquito repellents derive their effectiveness from chemicals. DEET, chemically known as N, N-diethyl-methyltoluamide is the most common active compound of commercially available mosquito repellents. Products containing DEET currently are available to the public in a variety of liquids, lotions, sprays, and impregnated materials like wrist bands. Formulations registered for direct application to human skin contain 4 to 100 percent DEET. Although effective, the safety of topical DEET and DEET-based mosquito repellents has not yet been established in the Philippines.

Researchers from the University of the Philippines Los Baños (UPLB) conducted a study entitled, *Acute Systemic and Dermal Toxicity Testing in ICR Mice of N, N-diethyl-meta-toluamide (DEET): An Effective Mosquito Repelling Compound* which showed that 100 percent DEET concentration in repellent lotions may cause skin irritation and allergies.

Checking the dermal effects of DEET in varying concentration using mice, results of the study revealed that applying DEET with 50 percent or less concentration did not produce skin irritation or allergies. The 100 percent DEET concentration applied, on the other hand, produced second degree redness. The researchers concluded, "Lower concentrations of DEET can be considered as non-irritating

compounds and relatively safe to use. However, 100 percent DEET can be classified as potential irritant and allergen based on the shown reactions of tested animals."

Researchers, Venny Rose Y. Bico, Jussiaea V. Bariuan and Maria Amelita C. Estacio, warned that though insect repellents containing DEET do not pose serious health concern and, in fact, beneficial in repelling dengue mosquitoes, consumers should follow label directions and take proper precautions. They advised, "Public should be extra careful in choosing products such as insect repellents. Knowing the dosage of chemicals present in the products should not be overlooked. In case of adverse reactions to products with high DEET, discontinue use of the product, wash treated skin, and call physician for help. If you go to a doctor, take the repellent container with you." (Ana Ciaren P. Hipolito)



DOH Secretary Enrique Ona and San Fernando City Mayor Oscar Rodriguez together with Pampanga local executives thumbs down on dengue mosquito

ASEAN dengue day... from pg 1

Highlights of the celebration include simulation exercises on use of short messaging system (SMS) for real-time reporting on dengue cases, presentation of barangay dengue brigade (dengue warriors) of San Fernando City, and the signing of commitment of support by the local chief executives.

In his message, Secretary Ona emphasized that dengue prevention and control is a shared responsibility, "Unless everybody plays their role,

DOH raises dengue... from pg 1

One of the reasons why dengue cases are on the rise, according to Dr. Tayag, is because mosquitoes get help from the communities. "We nurture their eggs by allowing them to stay in our backyards. We created conducive environment for their living and breeding."

At present, the government prioritizes programs that control dengue by reducing the population of its vectors, *Aedes aegypti* and *Aedes albopictus*. "First, we have to know the 'scene of the crime.' We have to remember that containers are not created equal for mosquito breeding sites," said Dr. Tayag.

Mosquito habitats vary depending on the community. "In Quezon City, it could be old

tires. In Region I, it could be the bromeliad plants and maybe a different thing in other regions of the country. Eliminating mosquitoes starts by finding where mosquito breeding sites are," said Dr. Tayag.

Aside from mosquito population control, Dr. Tayag cited strategies on dengue prevention and control. "We need to enhance dengue surveillance, because it is the first line of defense. Through surveillance, we are able to determine dengue even before it occurs. We also need to adapt interventions to local conditions because what is applicable in Metro Manila may not be applicable in the regions. And most importantly, we need to harness cooperation and community participation," stressed Dr. Tayag. (Edmon B. Agron)

dengue will not be controlled."

Secretary Ona also reiterated the importance of community participation in the country's fight against dengue. "To control dengue, cleanliness of the surroundings is very important to avoid possible habitats favorable for mosquito living and breeding," said Dr. Ona.

Countries celebrating ASEAN Dengue Day include, Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam. (Edmon B. Agron)