# **Philippines**

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# PH leads way to stem cell therap

N A 1962 experiment, microbiologist Dr. Leonard Hayflick made a grim discovery that human cells grown in tissue culture would only divide a certain number of times, presumably because the telom-eres—special DNA sequences found at the tips of chromosomes located within the nucleus of the cells—shorten to a critical length.

and institutions to help us in our quest to enjoy longer, healthier, happier lives—using stem cell based therapy.

cells—shorten to a critical I
In other words, if telomeres
become too short to allow cell
replication, the cell stops dividing and will ultimately die.
This led Hayflick to realize
that even if an individual gets
through life without contracting a deadly disease or succumbing to a fatal accident,
that person will still die when
enough of his cells ceased dividing. This phenomenon now ing. This phenomenon now known as the "Hayflick Limit," sets an unsurpassable lifespan for our species at just over 120

years.
Interestingly, this has not discouraged us from trying to challenge the Hayflick Limit, learning new ways to live a healthier
life as well as using scientifically proven medication or procedure to fend off diseases or at dure to fend off diseases or at least keep in check what al-ready ails us. Should the neces-sity arise, we will not hesitate on getting our damaged tissue or organ "fixed" if not totally re-placed so long as we achieve the quality of life we desire. Of course, there are experts

"Stem cell-based therapy is emerging as a new concept for the treatment of various diseases. Owing to the extraordinary advances taking place in the field of cellular and molecular biology, we are slowly moving from just offering mechanical care to biological solutions," said Dr. Dante Dator, deputy executive director of the National Kidney and Transplant Institute in East Avenue, Quezon City.

The NRT is a tertiary medical center under the Department of

Health which primarily specializes in kidney diseases and organ transplantations. It was the first government hospital in the country to earn an ISO certification and is currently considered as a leader in its field in Asia.

The NKTI, which pioneered stem cell transplantation in the country in 1990 (and has been performing peripheral blood stem cell transplant since 2001), has upgraded and modernized its facilities with equipment at par with those found in the United States: Molecular and Cellular Therapeutics lab, and Cellular Therapeutics lab, which has already been work-ing on Dendritic Cell Vaccine ing on Dendritic Cell Vaccine therapy for cancers (prostate, kidney, breast, lung, liver, colon, gastric, pancreas, cervix, uterine, ovary, myeloma, and Jmphoma) together with its sister hospital Lung Center of the Philippines.

"Alot of people may not know this, but NKTI'S Stem Cell Transplantation Program has been performing blood and bone marrow transplantation procedures for years and had improved survival for a number of our patients who suffer from

of our patients who suffer from diseases like leukemias and lymphomas," shared Dator.

Faculty capability
Dator reported that to further strengthen NKTI's faculty's capability to match the modern-

ization drive, the hospital has been sending off staff to work with the world's leading institu-

with the world's leading institutions.

The Wake Forest Institute
for Regenerative Medicine is a
leader in translating scientific
discovery into clinical therapies
and I had the privilege to work
with world-renowned physicians and scientists whose goal
is to find a cure, rather than
merely to treat a disease. The
WFIRM was the first in the
world to engineer laboratorygrown organs that were successfully implanted into humans and this was the tissueengineered bladder, which was
pioneered by Dr. Anthony Atala, pioneered by Dr. Anthony Atala,

the institute's director and chair of the Department of Urology of Wake Forest School of Medicine," said Dr. Sigrid Agcaoili of NKTT's Department of Urology.

Atala had been working to build bladders from patient's own cells since 1990 and in 1999 implanted the first organ in a patient. In 2006, Atala reported the long-term results in seven children who had the surgery, which showed that the implanted bladders had improved function over time and proved function over time and are durable.

She reported that her two-

EDITOR'S MESSAGE

For this issue, we provide our readers an in-depth look at the latest revolution in medical science: cellular regeneration therapy or more commonly known as stem cell therapy.

We are all now just at the threshold of the medical breakthroughs being brought on by stem cell research. As medical knowledge progresses, stem could rearry and future applications for health and wellness will be simply amazing.

As medical science comes to the point where we can treat, rejuvenate and even regenerate our organs using advance technology, we need to step back from the excitement and the hype, sow could wisely choose the best providers of this state-of-the-art medical procedure.

By the providers of this state-of-the-art medical procedure is the best providers of this state-of-the-art medical procedure.

That said, we are glad to present to our readers this special, in-depth coverage of cellular regeneration therapy or stem cell therapy in the Philippines. We encourage you to use this information as your guide to the benefits.

Here's to health and wellness for all of us!

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HI-PRECISION DIAGNOSTICS:

## Comfort, convenience, and excellent service





IT WAS such a relief for me to dis over Hi-Precision Diagnostics laboratory—before the day I went there, I had been looking for a lab that could give me a Vitamin B deficiency test. It's not as easy as it sounds to find a lab that does that. sounds to find a lab that does that. I even inquired at two big hospitals and was told that they didn't have the test. So I was amazed to learn that Hi-Precision has, in fact, a Vitamin B deficiency test. They in fact can run any special tests that are not readily available in the Philippines for they have parturel labs in other countries.

ner labs in other countries.

I had gone to Hi-Precision's
Main Branch in Del Monte Avenue, Quezon City to get a chest Xenue, Quezon City to get a chest X-ray; a blood count; and a cholesterol test, and the lab creates quite an impression. My experience proved to me that tests given at a modern, high-tech, stand-alone tertiary medical diagnostic lab like Hi-Precision Diagnostics is just as effective as having one's tests done in a hospital.

The lobby and reception area is spacious very clean and well-lir spacious very clean and well-lir

The lobby and reception area is spacious, very clean and well-lit, with a lot of seats available for patients, and fully air-conditioned. Patients undergo a fast, simple procedure for taking the tests, making the entire process very comfortable and convenient. Best of all, it's the human factor—the sense of being attended to by competent and caring medical personnel—that makes my experience at Hi-Precision a memo-

perience at Hi-Precision a mer rable one.

**Barcode labeling**The blood extraction was fast and the pain was negligible. After the extraction, the phlebotomist

human error
took the test tube to label it. Instead of writing my name on the
test tube label, however, she put a
bar code sticker on it.
All the information I gave at the
counter had been entered into Hi-

counter had been entered into Hi-Precision's database and digitized into a unique barcode that is des-ignated to me alone. Every sample specimen that I give to the lab for testing will have this barcode. The barcode is very important because it accurately identifies my speci-men from the time they extracted it, processed, and finally, to ensure the results I get are really mine. That was it for the blood test. Next. I had to get my chest. Yazy

Next, I had to get my chest X-ray done. I waited in line for about 10 minutes before my name was called by the X-ray technician. The X-ray procedure itself was really fast—it took about five minutes, maybe less. Hi-Precision's Del Monte branch uses high-tech, "filmless" X-ray processing which helps hasten the procedure even more.

### At par with International

Standards

I was also impressed that HiPrecision is not only ISO 9001 certified, but they are also accredited
by the Philippine Accreditation
Office under DTI for ISO 15189, Office under DTI for ISO 15189, the standard for quality specific for medical laboratories. I can be assured that the results I get are properly done and accurate, after all, it's my health we are talking about.

### Easy, fast, accurate

The computerized operations of Hi-Precision Diagnostics, together with its use of advanced laboratory equipment, minimize human equipment, minimize numan andling of specimens. This prac-

tically removes the risk of human error when it comes to labeling, sorting and analyzing the sam-ples.

Tests results are available in a matter of hours or the next day. These results may be e-mailed to the patient, or the patient may view the test results online through the Hi-Precision Diagnostics website. It's hassle-free and is very convenient for patients—especially those who are overseas—because they no longer have to go back to the clinic for the results.

seas—because they into longer have to go back to the climic for the results.

And if I go back and have the same blood tests again, they will give me my Cumulative Result as well, which is a side-by-side comparison of my results now and when I go back. This is very convenient for me to see whether my cholesterol has gone up (hopefully not).

Dusy to go pathenal, Hi-Precision also offers home service for blood tests or any imaging services like X-ray, ultrasound, 2d-echo and EGG. No need to fall in line to get your test, they can do right at the comfort of your home. To set an appointment, call 741-7777.

Hi-Precision Diagnostics provides laboratory and imaging services to patients referred by their doctors, to walk-in patients as well as corporate/HMO accounts that service employees.

Hi-Precision Diagnostics has 16 branches in Metro Manila and Cebus Soon, it will also be opening a branch in Dasmariñas, Cavite and Baliway, Bulacan. Visit the lab's allowed.

bu. Soon, it will also be opening a branch in Dasmariñas, Cavite and Baliway, Bulacan. Visit the lab's website at http://www.hi-preci-sion.com.ph for more information on their tests and services, as well as the location and contact infor-mation of their branches.

### Nurture Spa Village celebrates a decade of wellness

TUCKED away amidst lush coffee plantations of Tagaytay City lies Nurture Spa Village, named by CNN Go as one of Asia's Most Relaxing Spas and also named by Hongkong based Asia Spa Magazine as One of the Top Seven Spas of the Philippines. One of the Philippines' first destination spas, Nurture Spa goes beyond relaxation and pampering to offer corporate wellness and natural anti aging programs to address the pressing needs of today's modern, fast paced, highly stressed society.

The World Health Organization has named Noncommunicable Diseases (NCDs)—including cancer, high blood pressure, cardiovascular problems like heart attacks and strokes, chronic lung conditions, diabetes—as one of the greatest global concerns of the modern world. According to David Bloom, professor of Economics and Demography at Harvard's School of Public Health in Boston, the global decline in productivity due to illness and death from noncommunicable diseases will reach \$25 trillion by 2030, an amount seven times larger than the current level of global health spending. These diseases cause 60 percent of deaths worldwide, killing 36.1 million people annually according to the World Health Organization. NCDs are also called lifestyle diseases; as such, they could be minimized or eliminated by adopting a healthy lifestyle through a program of natural healing and sickness prevention.

Nurture Spa offers natural healing treatments for patients suffering from stress related sicknesses such as high blood pressure, cardiovascular disease, diabetes, kidney and liver problems. Patients' programs are customized using the DMS or Digital Meridian Scan, a computerized health scan which pinpoints areas of concern in the body based on the principles of Traditional Chinese Medicine. Natural healing treatments include nutritional support, herbal and homeopathic preparation, acupuncture, massage, diet therapy, fasting, ene-

mas to treat patients. Holistic healing activities including Qi Gong, deep breathing, meditation, exercise, laughter therapy and personal lifestyle coaching are also incor-

personal lifestyle coaching are also incorporated into the program.

The natural healing programs of Nurture Spa Village are jointly implemented by the Institute of Natural Healing (INH), headed by Dr. Samuel P Dizon and Nurture Spa co-owner Catherine Brillantes-Turvill. Dr. Dizon is a licensed medical doctor who studied methods on longevity, wellness, and alternative cancer regimens in Colorado and California USA where he also worked as an alternative medicine practitioner for several years. Turvill, co-owner of Nurture Spa, alternative medicine practitioner for sever-al years. Turvill, co-owner of Nurture Spa, is the president of the PHILWELL (formerly Spa Association of the Philippines), and is an Internationally Licensed Therapist (CIB-TAC UK) and Certified Wellness Educator who studied natural healing at the Living Foods Institute in Atlanta (USA) and Har-vard Medical School in Boston, Mas-sechusers (USA)

Foods Institute in Atlanta (USA) and Harvard Medical School in Boston, Massachusetts (USA).

Nurture Spa Village combines the healing programs of INH with the gentle ambiance and services of a tropical garden ersort spa to offer its unique brand of "Ecotherapy" or healing by or through nature. Patients undergoing natural healing programs are offered a seamless integration of caring, pampering and healing within the soothing ambiance of a tropical span resort. In the words of a German patient who flew in from Dusseldorf just to undergo a seven-day wellness program at Nurues Spa, "Ican't believe that a program this effective existed in the Philippines. I arrived extremely stressed, overweight and unwell. The beautiful garden, the caring staff together with the excellent therapies helped me emerge a much healthier and happier person—also 10 bls lighter, which I am very pleased about. I will tell others about Nurture Spa Village.

For more information, visit www.nurture.com.ph.



# Philippines to be headquarters of stem cell therapy and research hub of Asia

■ HE MUCH-ANTICI-PATED opening of the Asian Regener-ative Center for Cellular Therapies (ARCCT) will soon be taking stem cell therapy treatment to a whole new level and on a larger scale than ever belarger scale than ever before in the Philippines. Slated to open in September 2012, the center will

ber 2012, the center will provide cellular regeneration therapies to treat conditions related to aging and chronic pain.

The ARCCT will be a pioneer and a leader in medical research and innovations, immune and stem cell research and therapies, and in wellness and anti-aging programs. The research and therapies of the ARCCT will serve to advance knowledge of cellular regeneration medicine in Asia and the rest of the world.

rest of the world. Some of the medical services Some of the medical services and applications that the ARC-CT will offer include immune and stem cell storage; genetic tests; muscular dysfunction discases (orthopedic and reconstructive); chronic pain; antiaging therapies; organic vaccines; as well as cosmetic and dermatologic treatments.

"It is the ARCCT's vision to bring most advanced technology equipment available today

bring most advanced technology equipment available today for stem cell therapy or regenerative cellular therapy. This technology and machinery has never been brought to the Philippines prior to the ARCCT's establishment," said Cynthia Carrion, president of the Asian Holistic Medical Alliance,

which owns and administers the ARCCT in a joint venture with the US-based Keller Medi-cal Institute. Carrion is also the former Tourism Undersecretary that helped launch the Philip-pines' medical tourism pro-gram.

gram.

According to Carrion, the AR-CCT is envisioned to make the Philippines a hub for regenerative cellular therapies in Asia. It will not only offer medical treatments but also, just as importantly, the latest and best research or the present and first

treatments but also, just as inportantly, the latest and best research on the present and future applications of stem cell
technology.

"When it comes to cellular regeneration therapy, the Philippines and the rest of the world
have yet to discover its full potential for improving human
health. The kind of stem cell
therapy that is being done in the
Philippines today is just the tip
of the iceberg, so to speak.
What the ARCCT will do is
broaden the treatment applications of stem cell or regenerative cellular therapies, and offer
it on a larger scale at more affordable prices. This will bring
the benefits of cellular regeneration therapy to more people,
said Carrion.

Carrion added that the ARCCT's wide range of applications

Carrion added that the ARC-CT's wide range of applications for stem cell therapy offers the chance for many patients to re-ceive effective, non-surgical treatments for many types of ill-nesses and conditions. "We would rather refer to stem cell therapy as cellular re-generative therapy because of the wide range of applications that this new medical technolo-wy can offer patients. Also, ARC-

gy can offer patients. Also, ARC-CT will use stem cells that come

bryos.
"You see, stem cells can be

bryos.
"You see, stem cells can be sourced from bone marrow, cord blood, and even muscle, skin and adipose tissue. So if one has the proper technology, there's really no need to take from human or animal embryos," she explained.

Some conditions that cellular regeneration therapy is used for include the treatment of autoimmune diseases; arthritis and cerebral palsy; diabetes type 2; heart failure; multiple sclerosis; forn tendons, ligaments or muscles; stroke; Parkinson's disease; erectile dysfunction; hearing loss; muscular degeneration; pulmonary fibrosis; emphysema; spinal cord injuries; lupus and certain viral diseases. Cellular regeneration therapy may also be used ation therapy may also be used in cosmetic, anti-aging proce-

Another interesting application of cellular regeneration technology is in the storage of our immune cells. By the time a human being reaches the fifth decade of life, his or her immune cells have grown old. This compromises a person's immune seystem, reducing the body's capacity to fight diseases and the effects of old age.

"Cellular regeneration technology allows us to harvest immune cells, and to multiply and store them as healthy immune cells may be used on the patient to help fight various diseases, including cancer and aging-related conditions," said Carrion. The ARCCT is established through a partnership between Another interesting appli

through a partnership between



CYNTHIA Carrion, AHMA president and Dr. Robert Keller of US-based Keller Medical Institute partne to create the Asian Regenerative Center for Cellular Therapies set to make the Philippines a hub for regenerative cellular therapies in Asia

the Asian Holistic Medical Alliance and the US-based Keller Medical Institute, a leading clinical facility for cellular re-generation treatments that has generation treatments that has already patented its own thera-pies and procedures. The facili-ty is composed of world-renowned physicians in cellular regeneration medicine, includ-ing a Nobel Prize winner, under the leadership of its CEO and medical director, Dr. Robert Keller.

Keller.

Dr. Keller's expertise include non-surgical cosmetic treat-ments like lipolysis, skin lasers, cosmetic injections, autologous fat transfer, as well as advanced imaging and laboratory test analysis and wellness planning,

analysis and wellness planning, as well as predictive genetics. Dr. Keller also practices emergency medicine, family clinical, urgent care clinical skills and sports medicine. He is also the CEO and medical director of another clinic in the US, which is Regenertec, Inc.

The cutting-edge technology that will be used by the ARCCT also makes it a highly-advanced laboratory and diagnostics facility. For example, ARCCT patients may avail of a genetic test that will map which diseases they are at risk for, so they can take immediate steps to prevent mediate steps to prevent

those illnesses.

"Prevention is a major com-

ponent of the therapies that patients may avail of at the ARC.

Timagine, from just a simple saliva sample, the patient will already get information on what diseases they are vulnerable to. In other words, why wait until you get sick to get treatment? It's much better to know what illnesses you can prevent now, even before they occur," said Carrion.

Those who wish to take part in the next medical revolution and help the Philippines make an impact in the world of medicine are invited to join the ARCCT. Interested parties may ponent of the therapies that pa

ARCCT. Interested parties may send an e-mail to cnorton@sky broadband.com.ph.



### WORKSHOP FOR IMPLEMENTING INTERNATIONAL ACCREDITATION STANDARDS FOR SMALL **HEALTHCARE ORGANIZATIONS**

THE WORKSHOP for Implementing International Accreditation Standards for Small HealthCare Organizations was successfully held last May 7 and 8 at the MediCard Lifestyle Center in Makati City. Shown in photo are NABH International faculties (front row, fourth to sixth from in photo are NABH International faculities (front row, fourth to sixth from left) Dr. Antony Basile, Dr. Arati Verma and Joyce-Scoac-Alumno, executive director of HealthCORE along with the participants: (front row, from left) Cheran Martin (Primarycare Plus), Marinel Solano (MediCard), Mia Boquiron (MediCard), Dr. Elenita Simundac-Daco (Westlake Med. Center), Ma. Veronica Edades (MediCard), Sharry Sta. Westlake Med. Center) Ma. Veronica Edades (MediCard), Sharry Sta. Ana (MediCard), Jane Fallesgon (MediCard); (second row, from left) Dr. Ma. Olive Lazo (Patient First Med. Center), Dr. Generose Anteojo (Patient First Med. Center), Louise Marie Flores (ANSAP), Marie Therese Pacabis (ANSAP), Marie Linda Buhat (ANSAP) Dr. Gil Yarra (ICOHNS-Davao), Beverly Lozanes (MediCard), Marisciel Santisteban (MediCard), Dr. Catherine Jimenez (MediCard), Ray Intia (MediCard); (third row, from left) Dr. Nicky Montoya (MediCard), Nobell Isabelo (Antipolo Dist, Hospital) Sr. Pascual Pattaut (Taguig Dist. Hospital) St. Therese Multi-Specialty Services), Dr. Basilio Basilio, Jr. (Antipolo Dist. Hospital / St. Therese Multi-Specialty Services), Nilda Silvera (DOH), Dr. Arnel Enriquez (St. Anthony Med. Center), Engr. Roland Atlenza (DOH), Not in photo: Lorena Nash (MediCard), Janet Toribio (St. Anthony Med. Center), For the schedule of upcoming workshops, please visit www.healthcore.com.ph.







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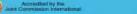
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# PH leads way to stem cell therapy

year training at the institute has given her the opportunity to learn the tech-nology of tissue engineering, which in-

nology of tissue engineering, which involves growing replacement organs and tissues in the lab to replace damaged or diseased tissue.

"This process usually starts with a three-dimensional structure called a scaffold that is used to support cells as they develop. I was involved in a project, which aimed to create an implantable kidney that can restore normal renal function. Shortage of organs for kidney transplantation has been a problem worldwide—the Philippines included. We think that a regenerative medicine approach using patients medicine approach using patient's own renal cells seeded onto a kidney

own renal cells seeded onto a kidney scaffold can be an alternative to donor transplantation. In this case, there is no risk of rejection because the cells grew from patient's own cells, "reported Agcaoili.

She said this is no longer science fiction considering the skin, blood vessels, bladder, trachea, esophagus, muscle and other types of tissues have been successfully engineered and in fact, been used in treating human diseases. "Armed with the right training and competent personnel, I believe that we can incorporate regenerative medicine and tissue engineering in the clinical armamentarium for the Filipino patients," she said.

armamentarium for the Filipino patients," she said.

The NKTI is set to collaborate a clinical trial with WFIRM using tissue-engineered bladders for children who have poorly functional urinary bladders (because of a congenital birth defect due to incomplete closure of the spine). "We do hope that with this collaboration, we can give the same value of care to Filipino patients," hoped Agcaoili.

NKTI is currently working on a hy-brid project where the dendritic cell will be fused with a viral sector that attacks certain cancers specially head and neck tumors

### No longer impossible

No longer impossible
"It is no longer impossible or beyond
the realm of possibility that the few of
us could now provide the expertise and
best services that patients seek. The
key word here is 'personalized molecullar medicine.' We should realize that
when it comes to treating patients, no
two individuals and no two diseases
are the same. Thus, doctors can now
select a therapy or treatment protocol
based on a patient's molecular profile
that may not only minimize harmful
side effects and ensure a more successful outcome, but can also help contain
costs compared with a 'trial-and-error'
approach to disease treatment," costs compared with a 'trial- and-error' approach to disease treatment," stressed Dr. Samuel Bernal, a world-renowned Filipino-American cancer specialist and molecular biologist, UCLA Professor Emeritus in Medicine and consultant-adviser to The Medical City's Regenerative Program.

Bernal passionately believes that personalized molecular medicine holds the key to revolutionizing the treatment of diseases such as cancer, diabetes, neurological diseases, diseases of the liver, bones, heart, kidney

'Why would a Filipino seeking the very best care stay here in the Philippines and not to fly to the United States? The answer is Personalized Molecular Medicine-which is very labor intensive, requiring a large number of trained molecular biologists and biochemists who work closely with clinicians in customizing treatment according to the molecular

characteristics of the patient's condition'



DR. SAMUEL Bernal, a worldrenowned Filipino-American can specialist and molecular biologist UCLA Professor Emeritus in Med UCLA Professor Emeritus in Medicine and consultant-adviser to The Medical City's Regenerative Program at the TMC's laboratory

City's Regenerative Program at the TMC's laboratory and other degenerative diseases. "The field has been spurred in recent years by rapid advances in molecular medicine—such as biochemistry, biophysics, nanotechnology, molecular genetics, molecular immunology, molecular immunology, molecular pharmacology, biomaterials, biomedical engineering—new possibilities open up for what can be accomplished. The key to all these developments are our stem cells, which have the ability to become various types of cells or be sensitized to attack diseased cells, including malignant tumors," he explained. The doctor thanks Dr. Alfredo Bengzon, president and CEO of The Medical City in Pasig for his vision to establish a center of excellence that would provide an end to end solution for stem

vide an end to end solution for st

wide an end to end solution for stem cell research, clinical research and therapy here in the Philippines.

Many years ago, the Philippines already conducted research in regenerative medicine, starting in 1986 when Dr. Alfredo Bengzon was Secretary of Health, and now president and CEO of The Medical City in Pasig. The Regenerative Medicine Program has been expanded at The Medical City, as part of Dr. Bengzon's vision to establish a center of excellence in the Philippines that would provide comprehensive range of clinical and laboratory services in molecular and cellular therapeutics, including stem cell therapies, for Filipino and international patients.

But with the Regenerative Medicine

ipino and international patients.

But with the Regenerative Medicine
Program now established at the The
Medical City (with the whole 12th
floor devoted to this center), the hospiand caveled to mis center), the hospi-tal could now boast as being one of the most advanced in the world, with only a handful of institutions in the United States and Europe that could rival the expertise and services it offers. The Medical City's Regenerative Medicine Program offers cutting-edge

procedures including Stem Cell Transprocedures including Stem Cell Trans-plants wherein infused stem cells har-vested from the patient's bone marrow are processed and "coaxed" to become cells of a specific organ or tissue type-and in turn, used to preserve, repair or enhance the functions of the patient's target organ. Another service offered includes the Dentritic Cell Therapy, wherein the patient body's own de-fense system (immune system) is uti-lized to effectively recognize and de-stroy cancer cells. stroy cancer cells

The most effective and safest cells to use for treatments in humans are human adult cells (especially the natural healing cells from the bone marrow) and human umbilical cord cells, according to Bernal. Human adult and umbilical cord stem cells are also morally, ethically and legally acceptable, unlike embryonic, aborted fetus, genetically altered, and animal stem cells.

### Leader

"Many Filipinos may not realize this but the Philippines is now regarded as one of the leaders in regenerative medicine considering that a number of medical institutions here, The Medical medical institutions here, The Medical City included, have spert not only hundreds of millions of dollars in ac-quiring the latest and most sophisticat-ed equipment but also in acquiring personnel who trained under the watchful eye of world renowned ex-perts if not pioneers in their respective fields," Bernal said.

"Many Filipinos may not realize this but the Philippines is now regarded as one of the leaders in regenerative medicine considering that a number of medical institu tions here, The Medical City included, have spent not only hundreds of millions of dollars in acquiring the latest and nost sophisticated equipment but also in acquiring person-nel who trained under the watchful eye of world renowned experts if not pioneers in their respective fields," Bernal said. In fact, many patients from foreign buntries, such as the US, Europe, Rus-



STEM cells being processed at the NKTI's Molecular and Cellular Therapeutics Laboratory



sia and Australia travel to avail of ser vices at The Medical City. Some pa tients are foreign doctors with serious illnesses who already failed treatments at other medical centers including the US. But why would a foreign patient, say from New York, travel all the way to the Philippines when that person could go to Harvard, Johns Hopkins, Memorial Sloan-Kettering or MD Anderson? At the same time, why would a Filipino seeking the very best care stay here in the Philippines and not fly to the United States? The answer is Personalized Molecular Medicine—which is very labor intensive, requiring a tients are foreign doctors with serious is very labor intensive, requiring a large number of trained molecular biologists and biochemists who work closely with clinicians in customizing treatment according to the molecular characteristics of the patient's condi-

characteristics of the patient's condi-tion, says Bernal.

Aside from being a US Board Certi-fied Internist and Medical Oncologist,
Dr. Bernal himself is trained as a chemist and has a Ph.D. in Biochemical
Pathology from the University of
Chicago, where he worked with sever-al Nobel Prize winners in Medicine and
Chemistry. Later, he was a Principal In-vestigator in Molecular Medicine at
Harvard and UCLA, where he did
molecular research and trained many



"A LOT of people may not know this, but NKTI's Stem Cell Transplantation Program has been performing blood and bone marrow transplantation pone marrow transplantation procedures for years and had improved survival for a number of our patients who suffer from diseases like leukemias and lymphomas," shared NKTI deputy executive director Dr. Dante Dator.

molecular biologists from the US, Europe, Japan and Korea, as well as some secientists from the Philippines who are now working in various Philippine institutions. Dr. Bernal continues to train many biochemists, molecular biologists, and clinical specialists in the US, Europe and in the Philippines, particularly at the Ateneo School of Science and Engineering and the University of Santo Tomas.

### Beefing up

Beefing up
Of course, other leading medical institutions in the country are also beefing up their facilities that involved stem cell-based therapy. In line with the 2015 mission of the Makati Medical Center, the hospital recently inaugurated the Cellular Therapeutics Lab (located at the 6th floor of Tower 2) that is set to give hope to those with cancer, diabetes Type 1, neurologic diseases and joints disorders.

"Before we could even convince pa-

eases and joints disorders.
"Before we could even convince pa-tients, we need to assure them that their cells will be processed by one of the most experienced staff and ad-vanced facilities in the region. We offer ultraclean room facility (class 100) that can handle cell-based products and culture facility. conhistigated most and culture facility; sophisticated pro-cedure to isolate stem cell (magnetic-activated cell sorting); meticulous quality control and documentation; high-end equipment that are operated by experienced scientists; and estab-lished system to monitor the patient's progress;" enumerated Dr. Eric Flores, progress, enumerated Dr. Eric Flores, head of MMC Cellular Therapeutics

Laboratory.
Ensuring that the more than 170 sq.m. facility is free from biological and non-living contaminants is crucial considering that most of their patients suffers from a weakened immune sys-

tem.

"We put premium importance in the quality and sterility of the product. PH LEADS/ 15

# The future of anti-aging and rejuvenation

### By Charles E. Buban

WE'VE always been told that excess fat—specially those around our bellies—is bad. But these unwanted tissues that plastic surgeons have been removing and throwing away for decades may be more valuable than they could ever invaring.

ever imagine.

These fats may end up, after all, as a very useful tool to make everyone feel great and away from diseases.

from diseases.

Indeed, the use of autologous fat (meaning: sourced one's own fat tissues) stem cells are fast becoming a game changer in the field of regenerative medicine. It is a new frontier that is slowly gaining acceptance among individuals wanting to be rejuvenated, and whose immune functions to the control of th

ing to be rejuvenated, and whose immine tunc-tion and disease resistance greatly improved. In fact, a number of experts and institutions are already using fat stem cells not just for cos-metic effects but to meet the slowly rising demand for anti-aging and rejuvenation treat-ments because it is plentiful in supply, it's easier to obtain, and relatively inexpensive compared to a bone marrow extraction.

### Anti-aging

"We always thought that stem cell-based treatment is for those who have used up all the conventional medical treatment options or whose diseases are already in the end stages. But what if tell you that apart from improving the management of degenerative diseases like diabetes, Alzheimer's, Parkinson's, arthritis, the autologous fat stem cell transplant could also be used as an anti-aging agent, for boosting immune system, mental alertness and even libido?" shared Dr. Florencio Lucero, regarded as the one who pioneered the autologous fat stem





(AFTER 3 MONTHS)

cell transplant in the Philippines

Lucero, a renowned plastic surgeon with 32 years experience and has been doing the autologus fat stem cell transplant since 2006, explained that the procedure involves suctioning at least 100mL of fats out from the patient's abdominal or tummy area just like in a liposuction procedure.

an teast room. On the patient's and official composition of the patient's and official composition. He explained that fat tissue yields an abundance of adipose stem cells when compared to any other source (ranging in the millions per unit volume when compared to those taken from the bone marrow and peripheral blood) and that the process is simple, employing minimally invasive mini-liposuction procedure.

"The harvested fats are then processed so stem cells could be extracted. The harvested stem cells are then activated using the growth factors released from the plasma of the patient's blood. Once activated, the stem cells are added to the intravenous fluid being infused to the patient for about 30 minutes to one hour. The whole procedure takes four hours to complete,"

related Lucero.

The patient should be able to feel the effect from two weeks to up to 11 months.

Lucero, a premier key opinion leader in the field of plastic, aesthetic and reconstructive surgery, shared that he is a licensed fat stem cell transplant surgeon by the technology provider from Australia and performs the procedure at a world class ambulatory facility, MEDICard Lifestyle Center located at the corner of Paseo de Roxas and Sen. Gil Puyat avenue, Makati City.

### Platelet-Rich Plasma (PRP)

The philosophy to merge cutting edge technology with the body's natural ability to heal itself is especially evident in another new technology called platelet rich plasma.

"Platelet-rich plasma is a natural component

of our blood. One good example is w skin is scratched or cut. If we cle skin is scratched or cut. If we clean, put medicine and dress the wound, the skin heals meanine and dress the wound, the skin heals and closes eventually. But this procedure only addresses the infection—the closing of the wound and the smoothening of the skin is courtesy of our body's natural healer. It is the platelets in our blood that activate a natural process that repairs and knits damaged cells," explained Dr. Mary Jane Torres of Zen Institute, a medical spa.

edical spa.

She further explained that the PRP is non-s

sne turther explained that the PRP is non-surgical and non-invasive since the process involves using the patient's own blood and thus poses no risk of allergy.

The most common conditions for PRP therapy include: fine wrinkles around the eyes, nasolabial grooves, wrinkles on the lips, acne marks, wrinkles on the forehead, wrinkles on the neck, bags and dark circles under the eyes and loose and saggy skin.



A small amount of blood is taken from the pa -no more than what is usually taken routine blood test—and then processed to "har-vest" PRP. This PRP is then injected into the site where wrinkles and fine lines are present. Within

where wrinkles and fine lines are present. Within about 30 minutes, the lifting and smoothening effects are clearly visible, said Torres.

The PRP addresses that fact that the aged skin has less collagen, has reduced amount of hyaluronic acid, and low ability to retain moisture. What PRP does is to release growth factors that allow cell growth and production of collagen. With enough amount of collagen and improved skin elasticity, the skin's ability to retain moisture is restored.

The Zen Institute (A Medical Spa) is located at Linti Cl and C2. 32nd Street in Bonifacio Global

Unit C1 and C2, 32nd Street in Bonifacio Global City, Taguig. Visit www.thezeninstitute.com

# PH leads way to stem cell therapy

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Our laboratory is unmatched in terms of providing the best cellular product or qualify. In comparison with other laboratories, the lab is at least three notches better in providing a sterile environment. In fact, the Biosafety Level 5 instituted here is at least one or two notches higher than what is recommended by the US Food and Drug Administration. Moreover, as part of the routine procedure, the facility is continuously monitored for its sterility," assured Dr. Francis Chung, scientific officer of the Cel. Francis Chung, scientific officer of the Cel-lular Therapeutics Laboratory's Stem Cell

Lab.

He related that in cases wherein the stem He related that in cases wherein the stem cells will be sourced out from a donor, the MMC Cellular Therapeutics Laboratory has the ability to identify a possible crossmatch—using 10-point DNA matching—for the recipient. "We have the technology to push this cellular transplantation process that will significantly minimize complications," said Chung.

### Stem cell transplant for eyes

Stem cell transplant for eyes
In 2006, St. Luke's Medical Center made
history when the hospital's International
Eye Institute successfully performed a conjuctival stem cell transplant on a 52-yearold indigent male—harvesting healthy
stem cells from his remaining good eye and
then transplanted to his injured eye, replacing the missing cells:

then transplanted to his injured eye, replac-ing the missing cells.

Presently, the hospital's Stem Cell Re-search and Biotechnology Division is busy doing a lot of work on stem cell-based ther-apy and at the same time working closely with cardiology, vascular medicine, cancer, neurology, ophthalmology and dermatolo-gy department in order to explore and doc-ument their experience in their respective field.

Dr. Mark Pierre Dimamay of St. Luke's Medical Center Stem Cell Research and Biotechnology Division reported that the hospital has also established collaborations hospital has also established collaborations with leading institutions namely, Singapore's Eye Research Institute, Korea's Hanyang University, United States' University of Miami, and Germany's TICEBA (an highly innovative German life science company, working in the field of stem-cell re-

search and regenerative medicine).

Dimamay also shared that the hospital also completed its equipment and requirements for growing human cells. "The entire process of collecting cells from the patient, processing and growing them can be done at SLMC. We have also applied for the Philippine Food and Drug Administration's Good Manufacturing Practice certification to ensure that the cells that we generate are made in accordance to international standards. We also acquired a cell-sorting equipment—known as the Clini-MACS—and applied the standard cell culture techniques for growing the stem cells. To develop the technical skills in growing stem cells, we underwent training abroad like Singapore Eye Research Institute for growing ocular stem cells," he explained.

Dimamay added that being able to grow stem cells and get pure stem cell populations is helpful in treating a variety of degenerative diseases. "One should realize that adult stem cells are few in number and if these cells can be grown and allowed to multiply in the laboratory, more stem cells can be potentially used for treatment. The cell sorter that we acquired will ensure that the cells being given to the patient are puts tem cells, without any other cellular constemed.

the cells being given to the patient are pure stem cells, without any other cellular con-

stem cells, without any other cellular contaminants.

Dr. Joven Cuanang, St. Luke's Medical Center (SLMC) chief medical officer and SVP for medical affairs said that the hospital is conducting clinical trials as well as testing to gather evidence and data on a per disease basis to prove if such treatments really work.

Cuanang and Dimamay believe this will increase the credibility of the treatments offered here in the Philippines adding that in the absence of such clinical trials, anyone can offer stem cell therapy at a high premium, and just leave the results of the treatment by chance. "If the treatments don't work, then the reputation of the institution and even the Philippines would be at stake," Dimamay explained.

NEXT ISSUE: APPLICATIONS AND SOURCES OF STEM CELL THERAPY



# A mother's instinct to protect

EVERYTHING starts falling into ing to have our annual medical check-up when the technician good news.

"My husband and I were go-"You cannot have your chest X-"

"Because you're pregnant."
"We were so happy when we heard the news that we actually



MUTYA Laxa Buensuceso believes that cord blood banking is an important investment, given its ability to biologically save her babies in the event of serious diseases.

told the technician to go back inside the lab, come out again, and announce it a second time and announce it a second time around. As with all amazing milestones in my life, getting pregnant with our second child was a true blessing," shares ex-cited wife and mompreneur, Mutya Laxa Buensuceso.

For pregnant moms, carrying a baby is a journey. With all the months of taking the right diet months of taking the right diet and supplements, going through numerous doctor vis-its, and shopping for baby clothes, there will always be that extra mile mothers will take to further their prepara-tions and ensure the utmost tions and ensure the utmost wellbeing of their new baby.

a mother of two. I eas-

ily get worried about my babies' health. Children can easily catch a cold or get into an acci-dent, and it's hard when they can't articulate how they feel or when something hurts," says Mutya. "This is why I was very relieved when I learned about relieved when I learned about the availability and benefits of cord blood banking here in the Philippines. I think it is an im-portant investment, given its ability to biologically save my babies in the event of serious diseases.

Today, nothing is impossible Today, nothing is impossible with medical science. The benefits of cord blood banking can only get better in the future. According to Dr. Faundo, medical representative for CordLife, the stem cells contained in a cord blood are the key component of the whole treatment. Such storage of cord blood is done by

specialized medical facilities called cord blood banks." The foundation of cord blood

banking involves the use of cord blood stem cells collected from a baby's umbilical cord immedia babys umbilical cord immediately following birth. Stem cells replenish the blood and immune system, and act as one of the most effective and natural ways for the body to be healed and revitalized. This means that if a child develops leukemia, too time his with error to be the side of the control of the side of the sid treating him with stem cells will stimulate his immune system to

stimulate his immune system to develop new red blood cells, which in turn, will help him recover from cancer.

In the Philippines, CordLife—the world-class cord blood processing and storage facility that is ISO 9001:2008 certified and is according to the DOM (Department). credited by the DOH (Depart-ment of Health)—is the first

cord blood processing and storage facility in the country that follows the stringent pro-cedures of American Association of Blood Banks to ensure that your baby gets the full po-tential factors essential to securing his health.

"There is a calmness I feel being a mother of two," Mutya describes. "It makes me see the world and the future in a different light, and it makes me a better person everyday. It serves as a challenge, a learning process and a gift all rolled into one. And with CordLife by my side, I know that I have a steadfast partner in safeguarding the future of my precious ones."

my precious ones."
For more information on
CordLife and cord blood banking, visit www.cordlife.com/ph or call 710-9195.

# La Breza Tower: your place for well-being

THOSE seeking the less stressful, quieter and more relaxing suburban lifestyle will find it in La Breza Tower,

lifestyle will find it in La Breza Tower, the 22-storey mix-use condorel and condominium property is strategically located in the idyllic, suburban environment of Diliman, Quezon City.

The Diliman area still retains the relaxing, quiet and spacious features of suburbia. There is still ample greenery and there is no crowding, in contrast to places like Makati and Ortigas. It is the perfect place to rest, recharge and make plans for future projects and achievements.

A unit at La Breza Tower is an investment in a lifestyle of health and wellness. Its luxurious amenities offer the peak of exclusive, comfortable and secure living. It is ideal for professionals, young families and empty-nesters who wish to enjoy the best of both worlds: a comfortable, relaxing and private hideaway that takes them away from the stresses of workaday life, while offering them the convenience and excitement of an urban, cosmopolitan existence. A unit at La Breza Tower is an invest-

citement of an urban, cosmopolitan existence. La Breza Tower also puts residents in close proximity to the city's world-class medical facilities like the NKTI (National Kidney and Transplant Insti-tute), the Lung Center of the Philip-

pines and the Philippine Heart Center. There are also many spas and specialty clinics in the area as well.

There are also many spas and specialty clinics in the area as well.

In Breza Tower's amenities include the La Breza Tower's amenities include the La Breza restaurant serving healthy Filipino and world cuisine; the gym that offers a complete fitness experience with cardio machines and weight machines, along free weights. The gym is adjacent to the open air pool area with a beautiful infinity pool for adults, a kiddie pool and a Jacuzzi, surrounded by refreshing greenery.

La Breza Tower is strategically located along Mother Ignacia Street, close to EDSA—the main artery of Metro Manila—offers easy access to any point in the metropolis. From there residents and guests may easily travel to Metro Manila's centers of business, leisure, entertainment, sports, shopping, and healthcare in Quezon City, ortigas, Makati and Fort Bonifacio. Transportation is very convenient as the EDSA thoroughfare has abundant taxicabs, buses and the Metro Railway Transit (MRT).

La Breza's prime location makes it advantageous for investors who are looking to lease their units to shorterm and long-term lessees. La Breza will also manage the leased units to ensure that a quality living environment

is maintained. The nightlife in both nearby Timog The nightlife in both nearby Timog and Tomas Morato avenues offers more opportunities for relaxation and recreation, as they are lined with restaurants and bars of every variety, offering an entire range of cuisines from all over the world—from Italian to Japanese, Filipino to Chinese, Fusion to Mediterranean, to American fast foods and comfort food.

There are also specialty dessert diners and coffee shops, as well as KIV establishments. There is always variety and excitement durine a nieth of food

and excitement during a night of food-tripping along Timog and Tomas Morato.

The luxurious five-star quality mar-The luxurious nwe-star quanty mar-ble-and-carpeted interiors and soft lighting evoke feelings of serenity and relaxation, while large glass panels al-low natural light to enter these areas. The Lift Lobby and the hallways on each floor are spacious enough to give maximum comfort to passing residents and quests.

and guests.

There's also a commercial area with restaurants and boutiques, banquet and function rooms. The condotel and residential areas have studio, one-bed-room and two-bedroom units. Residents and guests enjoy ample parking spaces and 24-hour security.

They have a choice of receiving a bare unit (already with finishing) or a fully furnished one (available at some additional cost). Studio units may be converted to a one bedroom unit, while a one-bedroom unit may be expanded to a two-bedroom one.

Units include bedroom, closet and bathroom. Most of the rooms have a garden and a longer balcony, offering a wider view of the city. La Breza units are available for purchase by residents and investors and its condotel is a favorite of foreign guests, celebrities and homes, phor call (02) 584-1164. vorite of foreign guests, celebrities and professionals who wish to enjoy the ex-

La Breza Tower is owned and developed by Sta. Lucia Realty and Development, Inc., one of the pioneering and most trusted developers in the Philippines. Architectural design is by W.V. Coscolluela and Associates while interior design is by Songsong & Periquet. Interested parties may get in touch with Royale Homes Marketing Corporation, which is exclusively marketing this luxurious hideaway. For more information, visit www.royale-bomes hay or call (102) 584-1146.

homes.ph or call (02) 584-1164 or 0922-8575078.



# Sta. Lucia Residenze: A Perfect Refuge in the City

career and work, as well as the requirements living with comfort and convenience are prime for health and life balance.

In the eastern side of the Metro, perhaps no residential development is set to offer outstanding comfort, luxury and convenience as the soon-to-rise Sta. Lucia Residenze.

### Redefining Condo Living

planned community composed of five residential towers that is beautifully architectainment destinations - ensuring great contured to pay homage to the stylish beauty of the cities of the Mediterranean.

With the architectural and interior design architectural firm of W.V. Coscolluela & Associates with interior design by Songsong &

community in the east is set to re-define conof raising a family, increase as never before, dominium living. It promises to become the newest and trendiest landmark high-rise residential community with its fashionable and elegant design, gazebos and sports facilities, superior swimming pool and landscaped garden amenities that are not present in other masterplanned communities

The Sta. Lucia Residenze is a master- plex will be linked to the Sta. Lucia Mall, one of the country's favorite shopping and entervenience to the Residenze's future owners and residents. The mall boasts of the best commercial establishments from leisure, dinof residential buildings led by the topnotch ing, entertainment and full department store, with specialty boutiques, as well as banks, hardware shops, pharmacies, internet shops

In this day and age, with demands from Periquet, the newest residential high-rise and BPO institutions inside the complex. living has become an affordable and at the Here, everything that the modern-day individual needs is within easy reach.

> The Sta. Lucia Residenze shall boast of its own upscale mall that will be connecting the five towers when fully finished to quickly and conveniently serve the needs of the future residents of the five-tower complex.

> This mall links the five towers at the ground floor and the first two floors of the towers will have high-end and famous retail shops. This spells incomparable superiority since the the Sta. Lucia Mall is just a walking walk away from Sta. Lucia Residenze. What more can the modern urban homeowner can want?

### **Elegant Living. Comfort and Pleasures**

For many of today's families and single into have their own place to call home, condo

same time more convenient alternative to a conventional house-and-lot home.

Residenze offers unmatched comfort, convenience and luxury in condo living, as the the residential component of the Sta. Lucia Center, the masterplanned community of Sta. Lucia Land, Inc., one of the country's most premiere property developers. In the blueprint also are office buildings and beautiful walkways that will connect Residenze to the Mall and the Brickroad dining complex, that promise to make it one of the more livable and comfortable communities in this side of the metro.

### In the Center of It All

The Stal Lucia Rezidenze is at the cusp of dividuals who prefer to be independent and the progressive cities of Marikina, Pasig and Antipolo, and the municipality of Cainta. Lo-

cated beside one of Metro Manila's prime shopping destinations, the Sta. Lucia Mall, the project will be the future residential centerpiece of the soon-tobe-launched Sta. Lucia Center, the next bia thing in masterplanned communities in the eastern part of the Metro.

Sta. Lucia Residenze is just minutes away from the LRT 2 terminal in Santolan, Pasig which connects to the ED-SA MRT at Cubao, Quezon City and to the LRT 1 line that traverses the Pasay-Manila-Caloocan corridor. And it offers outstanding location and accessi-

### Monte Carlo Soon to Break Ground

Monte Carlo, the first of the five-tower Sta. Lucia Residenze condominium complex, will soon break ground at the Sta. Lucia Center. It will bring to life the vibrant energy of one of Europe's most popular tourist hotspots.

This 21-storey residential tower offers 258 units composed of studio, onebedroom and two-bedroom units including a limited number of units, much less dense that the traditional cramped condominiums currently being offered by other developers.

For those who pay for the luxury to be at the top (17th to 21st floors) are the one- and two-bedroom units, giving a bird's eye view of the Antipolo and San Mateo hills rising on the east and the Marikina and Pasig valley at opposite sides. For the practical-minded are the studio units which are located at the 3rd to 16th floors, 16 of the studio units are at the 3rd floor recreation area that have their own piece of the garden facing the common landscaped garden grounds.

All units come fully finished with complete kitchen and bathroom. The future Monte Carlo residents will thus have the privilege of owning the newest condominium and be part of the future landmark that is Sta.Lucia Residenze.

Register now and make the wise move. For more information, visit www.rovalehomes.ph or call (02) 584-1164 or 09228575078

