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Key speakers at the event, including John Ferrelli (left), Jill Mathison (center right) and emcee Art Ulene (far right) release doves at the culmination of the Festival of Life at the Health Sciences Campus on May 31. The event is held on campus each year as part of National Cancer Survivors Day.

# Cancer survivors share tales of hope and courage at Festival of Life

## By Jon Nalick

In a festive atmosphere punctuated with song and laughter, more than 700 cancer survivors and family members gathered for the USC Norris Comprehensive Cancer Center and Hospital's 24th annual Festival of Life on May 31.

Art Ulene, MD, a Norris Cancer Center advisory board member and former "Today Show" medical correspondent, served as master of ceremonies for the event, which also featured testimonials by cancer survivors and encouragement from USC Norris physicians.

Educational booths staffed by cancer survivors, hospital employees and community organization representatives lined Harry and Celesta Pappas Quad as attendees filtered into the festival. One booth featured a "Scroll of Life," lauding the work and courage of patients and their medical support teams with handwritten notes of gratitude such as, "Thank you for saving my mommy, Dr. Russell."

Among those speaking at the event, held in recognition of National Cancer Survivors Day, were: Cary Roach, doctoral resident in occupational



Ellen Whalen, an ovarian cancer survivor who is also associate administrator at Keck Hospital of USC, shares her story with the crowd.

therapy who was diagnosed in 2012 with Hodgkins Lymphoma and Ellen Whalen, RN, MSN, DRSc, an ovarian cancer survivor who is also associate administrator at Keck Hospital of USC; and Heather Macdonald, MD, assistant professor of clinical obstetrics and gynecology and breast surgery.

To the applause and hoots of the crowd, Whalen showed off the cardinal-and-gold "Fight On" T-shirt she wore to each of her chemotherapy treatments after she was diagnosed with ovarian cancer in 2011. She said that she feared her Keck Hospital employees — suddenly having to treat

her as a patient — "might be nervous about sticking their boss with needles."

She quickly added: "I can tell you they were definitely not."

Macdonald praised the courage of cancer patients and their families, and pledged on behalf of physicians, "We will walk this road with you," and continually strive to provide better care as scientific advances open new avenues for treatment.

Festivities included music by the Bayou Brass Band, balloons, flowers and the release of one hundred white doves at the close of the ceremony.

## Mosqueda named chair of Dept. of Family Medicine

Laura A. Mosqueda, MD, has been named chair of the Department of Family Medicine, professor of family medicine and geriatrics (clinical scholar) and associate dean of primary care at the Keck School of Medicine of USC, effective July 1.

Making the announcement, Dean Carmen A. Puliafito, MD, MBA, called her "an outstanding clinician and innovative teacher with a proven track record as a dynamic builder of clinical, educational and interdisciplinary programs."

Mosqueda is a graduate of USC who served the past 16 years at the University of California, Irvine (UCI) School of Medicine as associate dean of primary care, chair and professor of family medicine and geriatrics, and holder of the the Ronald W. Reagan Endowed Chair in Geriatrics. Mosqueda is a widely respected authority on geriatric and family medicine, elder abuse, and care of the elderly and underserved.

She succeeds Jerry D. Gates, PhD, who will step down after serving as Chair



Laura A. Mosqueda

of the Department of Family Medicine since 2007.

Mosqueda is the co-director of the National Center on Elder Abuse, a federally-funded initiative that serves as the nation's coordinating body and clearinghouse for information on research, training, best practices, news and resources on elder abuse, neglect and exploitation.

She is the principal investigator for a major Health and Human Services-funded study that addresses primary and secondary prevention of the abuse of people who have a dementing illness, and is the leader of numerous other activities related to elder justice.

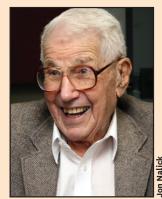
See **FAMILY MEDICINE**, page 2

## Former Keck School faculty member Norman Levan, 98

## By Hope Hamashige

Norman Levan, MD, professor emeritus and a former chief of the Department of Dermatology at the Keck School of Medicine of USC, died at his home in Bakersfield, CA., on May 25 at the age of 98.

Levan had a long and distinguished relationship with USC that started when he enrolled as a literature major as an undergraduate. He



Norman Levan

returned to USC to attend the Keck School of Medicine, from which he graduated in 1939, and passed his boards the following year.

He served in the Army Medical Corps during World War II before starting a practice in dermatology and joining the faculty of the Keck School. He was chair of the department of dermatology for 20 years, from 1961 to 1981. During that time, he established the Hansen's Disease Clinic for leprosy at LAC+USC Medical Center.

He also found a way to combine his interest in the humanities with medicine. He helped create the Keck School's first classes in bioethics, a collaboration with a religion professor that led to required ethics classes for medical

See **LEVAN**, page 2

## USC researchers call on cellphones for behavior study

#### By Leslie Ridgeway

A Keck School of Medicine of USC research study using cell phones to survey youngsters about sedentary behavior has given scientists what they believe is a more accurate snapshot of real-time sedentary activity among children than an after-the-fact survey could accomplish.

Yue Liao, lead author and a doctoral student in the Department of Preventive Medicine and the Institute for Health Promotion and Disease Prevention Research at the Keck School, said, "Using this method, we could capture daily behavior and ask questions about who the kids were with."

The research was recently published online in the *Journal of Physical Activity & Health*. Genevieve Dunton, MD, PhD, assistant professor of preventive medicine at the Institute for Health Promotion, was principal investigator.

The purpose of the research was to determine the most promising intervention targets for increasing physical activity among youngsters from the ages of 9 to 13. The goal was to learn where the children were, whom they were with and what they were doing when they weren't at school, thereby revealing sedentary behavior patterns.

Working with a team led by Stephen Intille, PhD, from Northeastern University that develops mobile phone health technology, the USC investigators sent 120 children 20 electronic surveys over a four-day period that included two weekdays and two weekend days. The surveys were sent randomly

over phones supplied by the team; the phones' only feature was to prompt the youngsters and accept answers to the survey, Liao said. Sedentary behavior was divided into productive (homework, reading) or leisure-oriented activity (playing video games, watching TV).

Seventy-seven percent of all the prompted surveys were answered by the children. The surveys demonstrated that the youngsters were usually at home with family members when they were least active. Fifty-eight percent of the reported sedentary activities occurred with family members, while 26 percent occurred while the children were alone.

"This could indicate an opportunity for family intervention," Liao said.

The team also found that the children were six times as likely to engage in leisure-oriented sedentary behavior instead of productive sedentary behavior when with friends, and when alone, were equally likely to engage in leisure or productive sedentary behavior.

Boys participating in the survey were three times as likely to engage in leisure-oriented sedentary activities over productive sedentary activities when not at school, Liao said. Girls were equally likely to engage in leisure-oriented and productive sedentary activities

## Join a walk for healthy hearts at Griffith Park on June 29

Keck Medical Center of USC is seeking participants to join the Trojan Hearts Team at the third annual Congenital Heart Walk that raises money for research to treat congenital heart disease.

The event will be June 29 at Griffith Park, and participants can register online at tinyurl.com/o6zrka9. To sponsor a walker or make a donation, visit the site and click "Find a Walk," choose "Los Angeles," and select "Trojan Hearts." All donations are tax deductible.

For more information, contact Noemi Adalin at (323) 442-5644.

## Baxter Foundation supports innovative, young medical researchers at USC

Gehrig's disease).

lateral sclerosis (ALS or Lou

The most common forms

of both ALS and FTD are

#### By Cristy Lytal

In 1959, the Donald E. and Delia B. Baxter Foundation made its first grant of \$6,000 to USC. Fifty-five years later, the foundation continues its tradition of supporting innovative medical research with \$100,000 awards to two talented assistant professors: Justin Ichida, PhD, in the Department of Stem Cell Biology and Regenerative

Medicine, and Kai Chen, PhD, in the Department of Radiology. The foundation also awarded \$100,000 for the Baxter Medical Student Summer Research Fellowship Program.

Ichida will use his award to find new ways to treat patients with two fatal neurodegenerative disorders: frontotemporal dementia (FTD) and amyotrophic caused by the same genetic mutation in which six letters of the genetic code repeat as many as 1,000 times. In FTD, this causes the death of neurons in the front and sides of the brain, leading to a loss of personality, emotions, empathy, memory and, eventually, basic bodily functions. In ALS, the mutation causes the death of motor neurons — the cells that

respiratory failure.
Ichida's lab is determining precisely how this genetic mutation causes these diseases, which will enable the

discovery of more targeted

drug therapies.

convey messages between the brain and the muscles

 leading to paralysis and usually resulting in fatal

"The Baxter Foundation is looking to fund projects that are going to improve the lives of patients sooner rather than later," said Ichida. "It's a good fit for us. We don't know the answer to the questions that we proposed, but we're close to finding out."

Chen's award will improve the lives of a different group of patients by advancing a tumor imaging technology called "positron emission tomography," or PET.

"This project leverages the

interdisciplinary expertise of our group covering the fields of supramolecular chemistry, nanoparticles, radiochemistry, molecular imaging and cancer biology," said Chen. "We envision that the success of our proposed research could change the current paradigm in PET cancer imaging, and open up new opportunities for pretargeted drug delivery."



Justin Ichida is seeking new ways to treat patients with frontotemporal dementia and amyotrophic lateral sclerosis.

## FAMILY MEDICINE: New chair named

## Continued from Page 1

At UCI, Mosqueda co-founded the nation's first Elder Abuse Forensics Center, which unites legal, medical, social services and law enforcement experts to improve the investigation and prosecution of elderabuse cases. In 2006, Los Angeles County agencies established a center patterned after UCI's. There are now four Elder Abuse Forensic Centers in California and one in New York. In April 2011, the center at UCI received

the U.S. Department of Justice's national Award for Professional Innovation in Victim Services.

She is also an expert on medical education curricula design, development and implementation. She was the principal investigator on a four-year, \$2 million grant from the Reynolds Foundation that led to integration of geriatrics education throughout the UCI School of Medicine and was chair of the school's committee that provided oversight of all medical education activities.

## HSC News Next Issue: June 27

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## **LEVAN**: Practiced medicine for 70 years

## Continued from page 1

students at the Keck School. Levan practiced medicine for more than 70 years and was still seeing patients in Bakersfield, where he opened a practice, until his retirement in 2012.

In addition to a distinguished career in medicine, Levan was a philanthropist who focused on giving to educational institutions. He gave generously to USC, establishing the Norman E. Levan chair in medical ethics at Keck and endowing the USC Levan Institute for Humanities and Ethics. He also pledged to create an endowed scholarship fund for Keck students.

"He's a man who is transforming the lives of countless students who will leave this university and go on to change the world," said President Max Nikias at a 2011 celebration honoring Levan.

Levan also made major donations to St. John's College, where he completed a master's degree in liberal arts, and to Bakersfield College.

## **HSC NEWSMAKERS**

The May/June 2014 edition of *Spine Surgery Today* announced that **John C. Liu**, MD, co-director of the USC Spine Center, was named the publication's chief medical editor for neurosurgery.

A May 29 report in the *Los Angeles Times* featured a study by **Scott Fruin**, DEnv, assistant professor of preventive medicine at the Keck School, and **Neelakshi Hudda**, PhD, research associate in preventive medicine at the Keck School, and colleagues finding that LAX is a major source of air pollution for communities up to 10 miles east of the runways. Cities affected include Lennox, El Segundo, Inglewood and parts of Los Angeles.

A May 27 article in *The Boston Globe* quoted **Arthur Toga**, PhD, co-director of the Institute for Neuroimaging and Informatics and Provost Professor at the Keck School, about the potential applications for advances in neuroscience. The *Washington Times* cited Toga.

A May 25 *Orlando Sentinel* report quoted **Richard Paulson**, MD, FACOG, director of USC Fertility and chief of the Division of Reproductive Endocrinology and Infertility at Keck School, about a woman who is supposedly the oldest woman to have a baby through in vitro fertilization.

A May 21 broadcast on CBS News' "This Morning" interviewed **David Agus**, MD, professor of medicine and engineering at Keck Medicine and the Viterbi School of Engineering, about the use of genetic sequencing in cancer treatment.

A May 20 *Los Angeles Times* article quoted **Anne Schuckman**, MD, assistant professor of urology at the Keck School, about the health impact in a police brutality case.

A May 20 *Los Angeles Times* report mentioned that the Keck Medical Center of USC and Los Angeles County+USC Medical Center will collaborate with other area healthcare providers to endorse end-of-life care guidelines.

A May 18 *Los Angeles Business* article featured **Grace Aldrovandi**, MD, associate professor of pediatrics at the Keck School, who has been named as chief of the Children's Hospital Los Angeles Division of Infectious Diseases. The story noted she has published more than 100 peer-reviewed publications and eight book chapters, and leads a research program at The Saban Research Institute studying the transmission of HIV in breast milk.

A May 14 column in the *Los Angeles Times* quoted **Lon Schneider**, MD, MS, professor of psychiatry, neurology, and gerontology at the Keck School, about age-related memory loss and Alzheimer's disease.

A May 9 Reuters story posted on Yahoo quoted **Rick Friedman**, MD, PhD, professor of otolaryngology and neurosurgery at the Keck School, about hearing loss in musicians. "Playing loud music consistently without any hearing protection is basically a death sentence for the ear," said Friedman.

A May 7 article in the *Los Angeles Times* featured **Laurie Eisenberg**, PhD, professor of research in the Department of Otolaryngology at the Keck School, and Mark Krieger, MD, associate professor of clinical pediatrics at the Keck School, about an operation on a 3-year-old child who was born deaf. The procedure was the first in a National Institutes of Health-funded clinical trial co-led by Eisenberg to study whether the device, which has traditionally been used on adults, is also effective in children.

A May 7 *International Business Times* article quoted **Jonathan Samet**, MD, MS, Flora L. Thornton Distinguished Chair of Preventive Medicine at the Keck School, about the health benefits of cigarette filters.

A May 7 article in the *Daily Pilot* mentioned **Burton Eisenberg**, MD, executive director of the Hoag/USC Norris
Cancer Program and professor of surgery at the Keck School, attended the Circle 1000 Founders' Brunch Celebration, which benefited the Hoag Family Cancer Institute.



With \$6.4 million in grants from the California Institute for Regenerative Medicine, Tracy Grikscheit and her team grew human small and large intestine in the laboratory.

## Keck School surgeon juggles science, skiing

#### By Cristy Lytal

Tracy Grikscheit, MD, really has her priorities straight.

"It goes: surgery, science, skiing. That's the order," said Grikscheit, principal investigator with USC Stem Cell and The Saban Research Institute of Children's Hospital Los Angeles, attending surgeon at Children's Hospital Los Angeles, and assistant professor of surgery at the Keck School of Medicine of USC and the USC Viterbi School of Engineering.

Even though Grikscheit believes that "surgery has to go before science, because the kids don't follow a schedule when they are ill," she has made astounding research breakthroughs. With \$6.4 million in grants from the California Institute for Regenerative Medicine (CIRM), Grikscheit and her team grew human small and large intestine in the laboratory.

Their approach is relatively simple: take discarded human intestine from the operating room, break it up and put it on a felt-like, biodegradable tube in a special machine. Before long, the various progenitors and stem cells begin to work together to form new intestine, which hopefully can eventually be reconnected to the patient's digestive tract.

Growing up near Alta, UT, Grikscheit discovered her passions for surgery, science and skiing. During high school, she visited the University of Utah lab that developed the artificial heart known as the Jarvik 7. This experience opened her eyes to the potential of combining medicine with engineering.

"I remember thinking, 'That's the future,' " she said.

By age 16, she was accepted to Harvard University, where she

majored in biochemistry. She attended medical school and worked in a lab at Columbia University in New York, did her surgery residency and research in another lab at Massachusetts General Hospital in Boston, and completed her pediatric surgery residency at Seattle Children's Hospital.

Before starting her job at Children's Hospital Los Angeles in 2006, she decided to climb Lhakpa Ri, a Tibetan mountain with a view of Everest. The snows of the monsoon season came early, trapping her at 21,000 feet. The experience tempered her enthusiasm for summiting the world's tallest peaks, and reminded her of the frontiers that matter most to her.

"There's been this revolution in stem cell science in the last decade that's getting very close to treating people," she said. "What fun! Science is going to be curing babies."

## Ming Hsieh Institute funds three nanomedicine studies

## By Amy Hamaker

Nanomedicine studies at USC received a boost thanks to the USC Ming Hsieh Institute for Research on Engineering–Medicine for Cancer. The institute recently announced three USC proposal grant awardees for 2014.

The USC Ming Hsieh Institute helps fund proposals for new nanomedicine research projects that show exceptional promise for translation into clinical trials for cancer treatment.

Awardees must demonstrate that a modest seed investment will have significant impact on the research, either by initiating a novel concept or accelerating clinical trials.

The three proposals awarded were:

- Min Yu, MD, PhD, (primary investigator, Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC), and Julie Lange, MD, (co-investigator, USC Viterbi School of Engineering), "Nanoparticle Mediated Delivery Targeting TAK1 as Metastatic Breast Cancer Therapy,"
- Peter Conti, MD, PhD, (co-investigator, Radiology) and Jennica Zaro, PhD, (Primary investigator, USC School of

Pharmacy), "Optimization of pH-Sensitive Nanoconstructs for Use in Targeting the Mildly Acidic Tumor Microenvironment;" and

• Alan Epstein, MD, PhD, (co-investigator, Pathology), Conti (co-investigator), Zibo Li, PhD, (co-investigator, Radiology) with Andrew McKay, PhD, (co-investigator, USC Pharmacy), "Bispecific Hybrid Nanoworms for Immunotherapy of B-Cell Lymphoma."

The USC Ming Hsieh Institute integrates engineering, scientific and medical research to help speed discovery and bench-to-bedside research that improves the lives of cancer patients. The institute hopes to help develop new therapeutic approaches that minimize the adverse effects typically associated with conventional chemotherapy agents.

The institute was established in 2010 through a generous gift from USC Trustee and graduate Ming Hsieh, CEO and chairman of Fulgent Therapeutics.

Hsieh recently was given the Elaine Stevely Hoffman Award for his extraordinary service in recognition of longstanding contributions and supreme dedication to the Keck School of Medicine of USC.

## Keck Medicine of USC - Pasadena employees walk for better health

#### By Amy E. Hamaker

According to First Lady Michelle Obama's "Let's Move" initiative, adults should strive to be active for at least 30 minutes per day, at least five days a week for six out of eight weeks. Regular exercise has substantial benefits, including looking and feeling better, lowered blood pressure and cholesterol levels, improved blood sugar levels, stronger bones, more energy, and reduced stress and depression.

Employees at Keck Medicine of USC – Pasadena have a way to meet their exercise goals and reap those benefits, thanks to a new healthy living initiative called Pasadena Wellness Walks.

The initiative, begun on March 20, comprises seven routes: Five are totally accessible indoors on the building's fourth floor, while two longer routes promote outdoor health and enjoyment around the block.

Each path has a recommended number of laps that equal 1 mile:

Outdoor routes include the North & South Lobby Route (six laps) and the Hospital Block Route (one

Indoor routes include the There and Back Again Route (20 laps), the Nurse's Station Blitz (13 laps), the Bronze Route (20 laps), the Silver Route (12 laps) and the Gold Route (10 laps).

Keck Medicine of USC

– Pasadena employees
received maps of the various
routes and healthy living
tips to kick off the initiative.
(The Nurse's Station Blitz,
Silver and Gold Routes
travel directly through
clinical areas, so walkers
were also cautioned to be
mindful of patients.)

"We can all be a little more healthy and fit," said Clark Whitworth, an administrative intern and master of public health student who, along with Sharon Lee, associate administrator at Keck Medicine of USC – Pasadena, created the program.

"Sharon is passionate about wellness, and when we developed these routes we knew that being busy is probably the No. 1

As part of a wellness program sponsored by Keck Medicine of USC – Pasadena, employees are encouraged to walk one of several courses of varying lengths around and through Huntington Memorial Hospital. Above, Tina Hernandez (left) and Carolina Garcia go on their daily walk along a two-mile course that skirts the perimeter of the hospital.

excuse for not exercising," he continued. "If people can build movement into their days, we can help

Enzyme used in antidepressants could deter prostate cancer

overcome that. We tried to put ourselves in the shoes of our nurses, doctors and staff during their full schedules."

## Calendar of Events

#### Wednesday, June 18

**Noon.** The Saban Research Institute of Children's Hospital Los Angeles Seminar. "Placental Metabolism and Molecular Transport: Implications in the Fetal Programming of Adult Mental Diseases," Alexandre Bonnin, USC. 4661 Sunset Blvd., Los Angeles. Parking at 4650 Sunset Blvd. Info: Harleen Gill, (323) 361-8626, hgill@chla.usc.edu, tinyurl.com/ndlk6al

#### Thursday, June 19

**9 a.m.** – **3 p.m.** International Center for Regulatory Science/ School of Pharmacy Symposium. "2014 Summerfest Kickoff: Collaborate, Innovate and Globalize," Guido Rasi, European Medicines Agency. Aresty Auditorium. Info: (323) 442-3521, piresmer@usc.edu. Registration and info: tinyurl.com/ nww9e2z

**11 a.m. - 1 p.m. 3rd** Annual Employee Safety Fair. Harlyne J.Norris Research Tower LG 503/504. Info: Robert Vance III, (323) 442-9915, robert.vance@med.usc.edu. Hospital employee ID badges are required for entry.

## Friday, June 20

**8:30 a.m. - 3 p.m.** Orthopaedic Surgery Continuing Medical Education. "USC Graduate Orthopaedic Society Scientific Meeting," Joseph D. Zuckerman, NYU School of Medicine. Aresty Auditorium. Info and RSVP: Sylvia Suarez, (323) 226-7204, sylsua@usc.edu

**11 a.m.** Hematology Grand Rounds. "Chimeric Antigen Receptor T Cells for the Treatment of Leukemia," Saar Gill, University of Pennsylvania. LAC+USC Inpatient Tower Room D. Info: Carolyn Castellanos, (323) 865-3913, carolyn. castellanos@med.usc.edu

**11 a.m.** Diabetes & Obesity Research Institute Seminar. "Endocrine Effects of Circulating DPP4," Jüergen Eckel, USC. Harkness Auditorium, CSC-250. Info: Christina Ayala, (323) 442-2500, trujille@usc.edu, usc-dori.org

## Wednesday, June 25

**Noon.** The Saban Research Institute of Children's Hospital Los Angeles Seminar. "Discover & Innovation Speaker Series: Reparative and Regenerative Medicine," Michael Longaker, Stanford University. 4661 Sunset Blvd., Los Angeles. Parking at 4650 Sunset Blvd. Info: Harleen Gill, (323) 361-8626, hgill@ehla.usc.edu, tinyurl.com/ouzdhpj

## Thursday, June 26

**11 a.m. - 1 p.m.** 3rd Annual Employee Safety Fair. Soto I Courtyard. Info: Robert Vance III, (323) 442-9915, robert. vance@med.usc.edu. Hospital employee ID badges are required for entry.

**Notice:** Calendar submissions must be received at least 10 days before an issue's publication date to be considered. Please note that timely submission does not guarantee an item will be printed. Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number or email address for information.

Submit calendar items at tinyurl.com/calendar-hsc.

## By Kukla Vera

A new study co-led by researchers at the USC School of Pharmacy, among others, has found that suppressing the enzyme monoamine oxidase A (MAO-A) reduced or even eliminated prostate tumor growth and metastasis in mice.

The finding opens the door for physicians to possibly use the antidepressant drugs that had targeted MAO-A as a cancer-suppressant as well.

Jean C. Shih, PhD, University Professor at the USC School of Pharmacy, said, "This is the first paper showing that MAO-A plays an important role in prostate cancer progression and metastasis. MAO-A inhibitors may provide an unmet need in cancer treatment."

Shih, who is cocorresponding author of a paper on the research that was published on May 27 in the Journal of Clinical Investigation, has studied MAO-A for 30 years. She collaborated with fellow co-corresponding author Leland Chung, a prostate cancer expert from Cedars-Sinai Medical Center. Their team included researchers from the Keck School of Medicine of USC and the Fourth Military Medical University in China. The first author, Boyang Wu, PhD, was Shih's doctoral student at USC.

Leland Chung, PhD, corresponding author of the paper and director of the Uro-Oncology Research Program at the CedarsSinai Samuel Oschin Comprehensive Cancer Institute, said that when this enzyme is not suppressed, it produces a tumor-rich environment that fuels the growth and metastasis of prostate cancer cells.

"Suppressing this enzyme and combining it with current therapies may provide a better way to manage and cure men with metastatic prostate cancer," he said.

MAO-A regulates the amount of neurotransmitters

in the central nervous system by deactivating some — breaking them down. Like all enzymes in the brain, MAO-A is needed in optimum quantities to keep a person healthy. Too much MAO-A has been linked with depression, while too little with autistic behaviors, aggression and anxiety.

Recently, scientists noticed that MAO-A levels were especially high in individuals suffering from prostate cancer, but were unable to determine why.

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