

touchpoints

Connecting you to the Heritage Provider Network

■ FEATURE STORY

HMRI & Caltech partner to preserve antibiotic strength

■ ANNOUNCEMENT



Heritage Provider Network and Crain's New York Business Announce Winners of the Innovation Awards.

■ GROUP SPOTLIGHT



Discover the benefits of an active lifestyle, participate in mindfulness and learn the importance of diabetes screening.





Richard Merkin, M.D.

Healthcare visionary, Dr. Richard Merkin, has spent the last 35 years implementing a successful, workable business model to address the needs and challenges of affordable managed healthcare.

THE RAPID INCREASE

of antibiotics prescribed by physicians has caused a worldwide crisis, creating a need to solve the growing bacteria resistance problem.

To help solve the problem, Heritage Medical Research Institute (HMRI) is supporting the efforts of scientists and engineers at the California Institute of Technology (Caltech). Caltech's cutting-edge research includes creating modular structures of molecules to preserve and improve the strength of antibiotic potency.

The Caltech lab is applying a "LEGO science" approach that will expand this technology and ultimately deliver a solution that can be commercialized and distributed.

HMRI's continued partnership with Caltech reinforces our commitment to deliver solutions to the problems plaguing our nation's healthcare system.

A handwritten signature in black ink, appearing to be 'RM', written in a cursive style.

Richard Merkin, M.D.
President and CEO of HPN

*touch*points
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Comments? Questions?

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SAVING ANTIBIOTIC STRENGTH

HERITAGE MEDICAL RESEARCH INSTITUTE CONTINUES TO SUPPORT CALTECH'S EFFORTS TO RE-ENGINEER MOLECULAR COMPOUNDS TO SAVE ANTIBIOTIC STRENGTH



Sarah E. Reisman, Ph.D.

Professor of Chemistry, HMRI Investigator, Executive Officer for Chemistry at Caltech

Dr. Reisman received her Ph.D. in Chemistry from Yale University. Her thesis detailed the total synthesis of the natural product welwitindolinone A isonitrile. The goal of her research program is to discover, develop, and study new chemical reactions within the context of natural product total synthesis. In the course of the last century, natural products have played a vital role in medical advancement and in organic chemistry.





■ Methicillin Resistance
■ Vancomycin Resistance

The graph above shows the percentage of resistant infections in US hospitals from 1982 to 2002.

FOR THE PAST FEW DECADES

a critical topic of discussion has been the growing public health crisis around bacterial resistance which continues to increase exponentially. This crisis has many health organizations launching national campaigns to target awareness and increase efforts to find a viable solution by educating physicians, healthcare providers, consumers, and employers about appropriate antibiotic usage. While antibiotics are an essential part of modern medicine and with more than 150 different antibiotics available in the market today, the prevalent misuse of these drugs has led to serious problems, such as bacterial resistance to antibiotics.

Physicians over-prescribing antibiotics, improper dosage, patient misuse of the drug, and mutations in bacteria can create antibiotic resistance that makes it increasingly difficult to treat potentially life-threatening illnesses. Long-term use of antibiotics can also result in the disruption of normal bodily functions and can make a person more susceptible to disease causing bacteria and infections. Proper infection prevention and control are essential factors that can assist

in saving antibiotic strength. The healthcare industry as a whole has a responsibility to change the attitude of physicians and consumers toward proper antibiotic utilization. A logical method of prevention would be to practice diligence with measuring the amount of antibiotics currently prescribed to patients. With this crisis on the rise, it has become imperative to save antibiotic strength to preserve its potency and effectively treat the conditions for which they were originally created.

In our pursuit to find solutions to address this concern, Heritage Medical Research Institute (HMRI) turns to California Institute of Technology’s (Caltech) scientists and engineers – our “HMRI Investigators” who specialize in multidisciplinary science and technology to discover new methods to fight diseases while progressively driving innovation forward to improve the human condition. One of HMRI’s Investigators at Caltech, Sarah E. Reisman, Ph.D., Professor of Chemistry and the Executive Officer for Chemistry at Caltech, is on the cutting-edge of studying antibiotic compounds to combat bacterial resistance. Professor Reisman specializes in organic chemistry and

92 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022

Feature Story (continued)

the development and study of total synthesis found in natural products. Half of the chemicals used today are found in nature. The complexity of re-engineering the structure of compounds and their unique relationship and interaction to each other, to mitigate drug-resistant drugs, is key to identifying the process of making them modular; or as she explains, “creating the building blocks, or LEGO-science” approach to find a more viable solution. While engineers and scientists in their respective fields



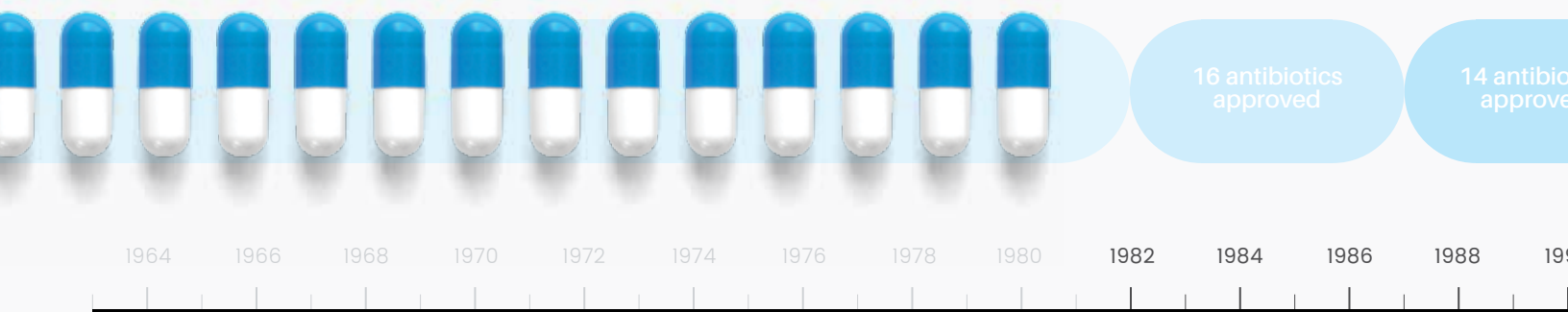
Approved Antibiotics ↓

The graph below shows the number of new antibiotics approved, in relation to the timeline, beginning from 1982. Antibiotic resistance is going up, while FDA approval of new drugs is going down. In 2013 the World Economic Forum identified antibiotic resistance as one of the greatest threats to human health.

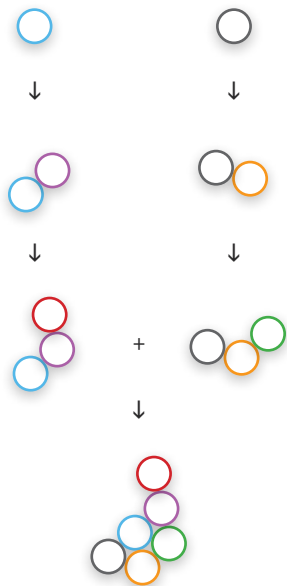
are conducting parallel studies, most are not working on the same class of the compound being studied at Caltech. Their novel approach is exclusive with respect to testing a particular molecule class.

The idea is rather than trying to build up a synthetic and take a molecule that has been isolated from a compound that has combative properties, they must first figure out how to make that compound and change the way they can remodel that structure. The average lifecycle from creating the molecular compounds, testing its viability to final verification takes approximately a year and a half – more or less. The most effective method is to test as many molecules at a given time; test them as they are being built. The modular approach is to make a few at a time so that they can swap out one for the other to avoid the step of having to start from the beginning if the particular

TRADITIONAL LINEAR APPROACH



BUILDING BLOCK APPROACH



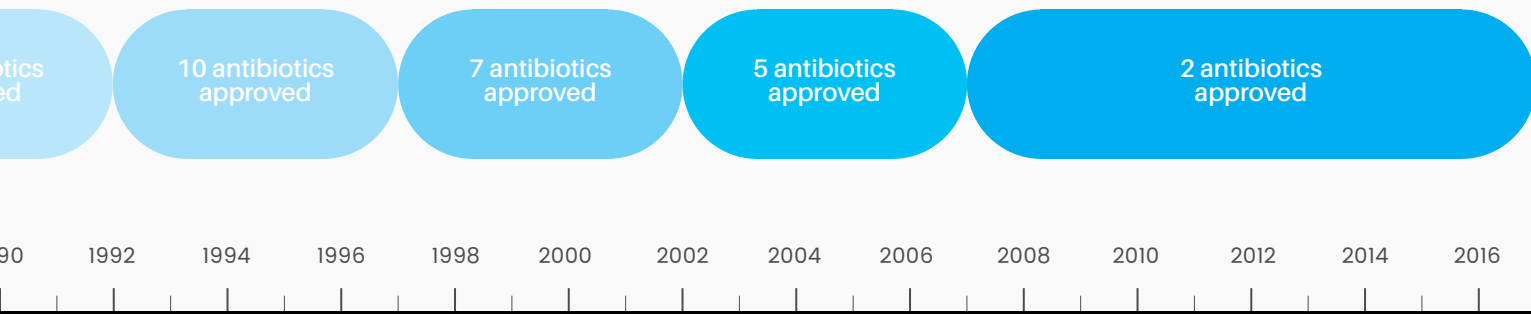
↑ The LEGO-Science Approach

The two diagrams above show the traditional linear approach versus a convergent "building block" approach, which improves yield, flexibility and is enabled by reaction development.

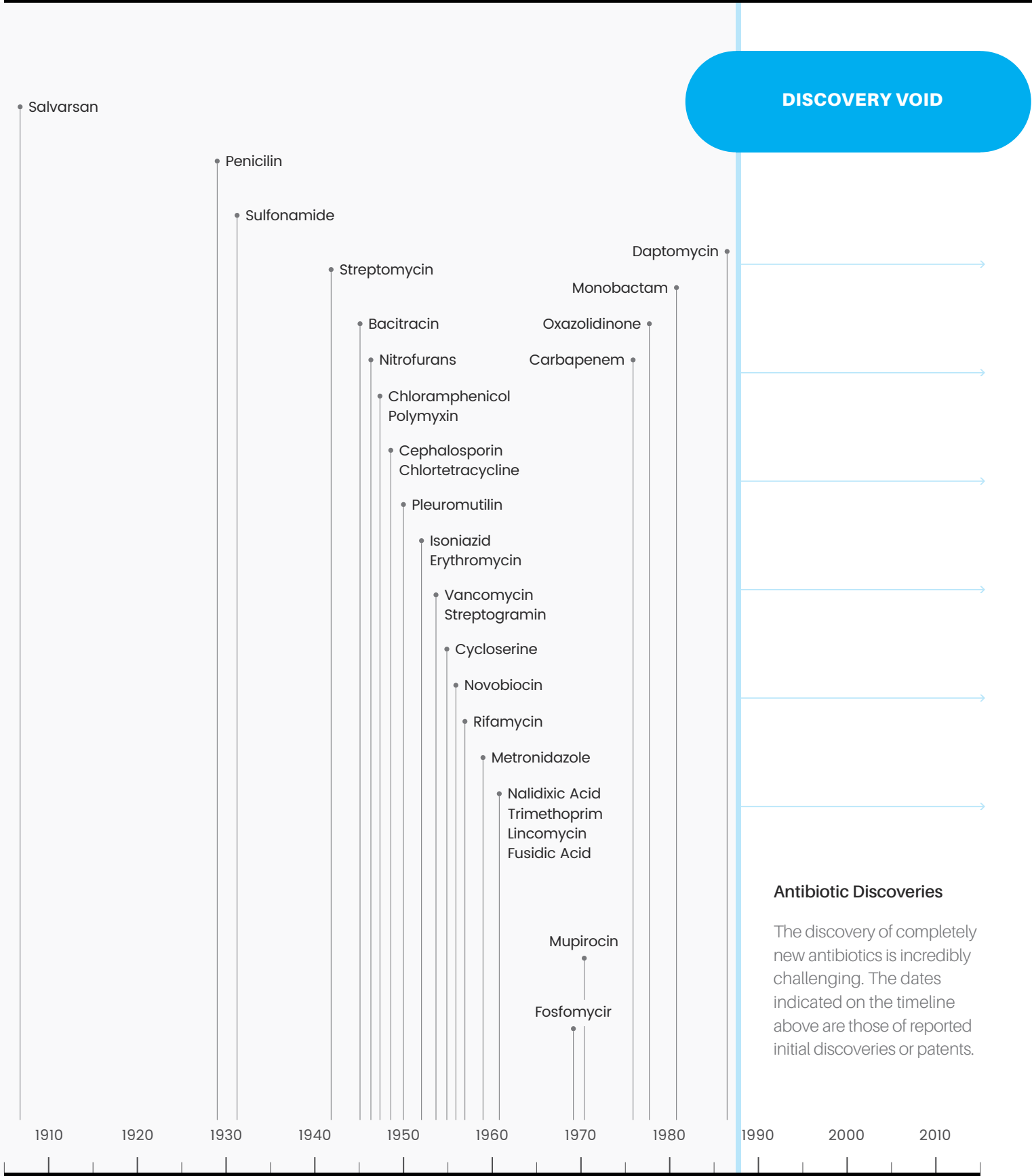


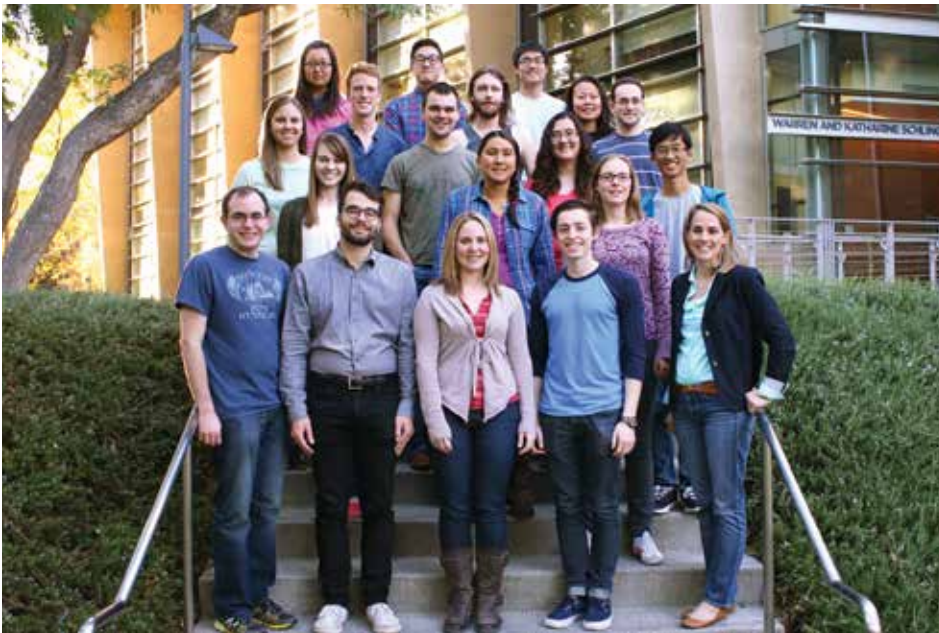
molecule's outcome is unsuccessful. This process requires setting up a screen of bacteria with known resistant properties to analyze them to determine each structure's function. The goal is to be able to create compounds based on the existing structures to achieve remodeling compound products

that convert good antibiotics to even better and more effective ones. Professor Reisman is confident that they have reached a point where they can successfully remodel compounds. While the application of this "LEGO" analogy to design cutting-edge molecules is one that the scientific community has yet



Feature Story *(continued)*





to figure out, Professor Reisman and her team have made significant progress with this first step and have a solid plan in place to move forward in presenting solutions to preserve antibiotic strength. Their optimistic endeavors are to discover a significant breakthrough within the next few years. She adds, “My hope is that if our findings follow the current pathway, we will be able to continue to make a series of compounds to map out the antibiotic properties. There is some interesting study on compound modification where you can make compounds that are effective against gram-positive bacteria as well as gram-negative bacteria. If we can figure out the structure of pleuromutilin and turn it into an antibiotic for gram-negative – which is a very challenging process

given that far fewer antibiotics are effective against gram-negative than gram-positive, then we should be able to gather enough data to determine our position to move forward and eventually license out the technology.”

THE COMMON COLD: BACTERIA VERSUS VIRUS

According to the Centers for Disease Control and Prevention (CDC), in the U.S. alone, doctors are prescribing more than 18 million courses of antibiotics each year just for the common cold, despite the universal belief in the medical community that colds are caused by viruses and not bacteria. This practice also results in an estimated 50 million unnecessary antibiotics being prescribed for the treatment of viral respiratory infections, thus contributing to the overwhelming

burden on the healthcare industry, specifically hospitals, to treat resistant bacteria caused by needless antibiotic prescriptions.

THE POSITIVE DIFFERENCE IS IN OUR PARTNERSHIP

HMRI’s support of Caltech allows for research and advancement in the fields of science and medicine to move forward with velocity due to its ability to collaborate more effectively. Dr. Merkin states, “Some universities work in silos, but where Caltech excels is in their unique ability to open all lines of communication, where promising scientists in their respective areas of expertise can collaborate, which reinforces our mutual vision to pioneer into the areas of technological innovation and medical advancements.”

“The positive interactions and camaraderie that we have created within this community allows us to understand and tackle the most difficult scientific and engineering issues so that we can ultimately deliver solutions to resolve the world’s biggest problems.” states Thomas Rosenbaum, President Chair and Professor of Physics at Caltech.

HMRI +  Caltech

HPN & CRAIN'S NEW YORK BUSINESS, CUSTOM DIVISION, ANNOUNCE WINNERS IN THE 2ND ANNUAL HERITAGE HEALTHCARE INNOVATION AWARDS FOR NEW YORK

By Janet Janjigian



Winners & Sponsors

HPN and Crain's 2017 Heritage Healthcare Innovation Awards

From left to right: Mark Wagar, HPN, Dr. Carl Nathan, Karen Ignagni, Dr. Richard Merkin, President & CEO of HPN, Dr. Nora V. Bergasa, Dr. Steven Safyer, Jill Kaplan, Crain's NY Business, Gil Addo



New York, May 22, 2017: Heritage Provider Network, one of the nation's most experienced and effective physician-led, value-based care organizations and Crain's Custom Studio, a division of Crain's New York Business, announced the winners of the 2nd Annual Heritage Healthcare Innovation Awards. The awards honored those innovators who have most improved the access to and quality of affordable healthcare in the communities they serve in the greater New York area. Winners were announced in the following five categories at a luncheon ceremony held at the New York Athletic Club in Manhattan:

HERITAGE INNOVATION IN HEALTHCARE DELIVERY

*Nora V. Bergasa, M.D., MACP,
FAASLD, AGAF Professor of Medicine,*

*New York Medical College; Chief of
Medicine, NYC Health + Hospitals/
Metropolitan.* Recognizing an
innovator in the development of new
modes of diagnosis, treatment and
care who actively improves access to
services and improves the quality of
healthcare overall.

HERITAGE TECHNOLOGY INNOVATOR IN HEALTHCARE

*Gil Addo, CEO and Co-founder,
RubiconMD.* Highlighting cutting-
edge applications of technology and
up-and-comers in the healthcare
industry. These breakthrough
innovators are making significant
contributions in the areas of
technology, research, or new
approaches to healthcare systems.

HERITAGE RESEARCH INVESTIGATORS IN TRANSLATIONAL MEDICINE

Carl Nathan, M.D., R. A. Rees Pritchett Professor of Microbiology; Chairman, Department of Microbiology & Immunology, Weill Cornell Medical College. Awarded to an individual or team based on the most significant quantitative results achieved by accelerating the transition of novel and innovative diagnostic tools and treatments to patients.

HERITAGE HEALTHCARE LEADERSHIP

Karen Ignagni, President and CEO, EmblemHealth. Recognizing a leader in the New York area that has demonstrated significant impact in their healthcare field. This forward-thinker has forever changed the way care systems work through new models, processes and pathways.

HERITAGE HEALTHCARE ORGANIZATIONAL LEADERSHIP

Steven Safyer, M.D., President and CEO, Montefiore Medicine. Honoring an organization that has fundamentally changed how healthcare is delivered. This organization has created or championed new ways of thinking and doing, uniting diverse

constituencies to work together. The healthcare awards competition garnered nominations across the spectrum of New York healthcare, from exciting early stage startups, to long established centers of New York Medical innovation. The complete list of 25 finalists can be found at www.craainsnewyork.com/heritage.

“The Heritage Healthcare NY Innovation Awards honors and recognizes those on the front lines of healthcare delivery successfully fighting daily for improved healthcare at lower costs for millions of New Yorkers and their families,” said Dr. Richard Merkin, President and CEO of HPN.

“We applaud the efforts of those exceptional winners as they are the leaders and innovators we rely on to create a convergence of new technologies and science that will change healthcare outcomes in the next decade. We are very proud to be the exclusive media partner of Heritage Provider Network for their 2nd year of their Heritage Healthcare Innovation Awards initiative, as they seek to recognize health care innovators who

have improved the lives of millions of New Yorkers,” said Jill Kaplan, Vice President and Publisher of Crain’s New York Business. “We applaud their continued dedicated commitment to shine a spotlight on those leaders who are thinking big – exploring new and novel health care approaches, offerings or services in New York and extend our sincerest congratulations to all of the 2017 Heritage Healthcare Innovation Awards finalists and winners.”

“Our Heritage New York Healthcare Innovation Award winners reflect the dream, spirit and promise of healthcare innovation we all strive for, with an important distinction. They have all personally, and organizationally made those promises to improve health, care, and cost a reality for tens of thousands of New Yorkers most in need, and lighting the way for others to follow,” said Mark Wagar, President of Heritage Medical Systems.

HPN + CRAIN'S
NEW YORK BUSINESS



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DR. JAY ROOK'S ACTIVE LIFESTYLE AND EXPERTISE BENEFITS OUTDOOR SPORTS COMMUNITY

By Dr. Jay Rook



Dr. Jay Rook, DO, M.P.H

"As we learn more about how the body heals and about ways we can optimize it, we increase the acceptance of more natural, non-invasive and non-surgical methods of healing and restoration available to our patients," — Dr. Jay Rook



Dr. Rook's approach to blending holistic strategies with conventional medicine to redefine the patient-physician experience is proving to benefit patients as well as High Desert Medical Group's athletes and those living an active lifestyle. It's important to reassure patients so that they know that they are truly understood by their doctor — their goals, priorities, desires, even their fears. When a doctor thinks about their patients' health and well-being in the same way they think about their own, a dialogue is created, inevitably leading to better care. Jay Rook DO, M.P.H. takes this philosophy to heart, which becomes evident in the way he delivers care to his patients.

Outside of work, Dr. Rook's hobbies are filled with adrenaline, and occasional injuries, which help him relate to his patients and find effective treatments. Dr. Rook joins Heritage Lifefit — a sector of Heritage Victor Valley Medical Group focused on preventive

medicine that looks at reshaping the process of making people healthier and keeping them that way so that they may live healthier, happier and more active lives.

As HVVMG's Integrative/Athletic Wellness physician, Dr. Rook is as active as he hopes his patients to be, in helping "break the physician-patient barrier while simultaneously maintaining professionalism." From mountain biking to engaging in competitive soccer, Dr. Rook and his family enjoy the outdoors as often as possible.

He admits that while there is no more scientific data for some of the field's treatments in comparison to more conventional pathways, patients and the medical community have become more open to these strategies. "In my opinion, the best practitioner is one who recognizes and has competent scientific understanding of when conventional therapy is appropriate, when an alternative therapy can be useful and when both can be advantageous to his or her patient,"

Dr. Rook said. Through this balance and his ability to relate to his patients, he hopes to redefine the clinic/patient-physician experience.

WHY MINDFULNESS IS RELEVANT IN 2017 - THE BEST TOOL FOR CHANGE IN YOUR LIFE

By Rebekah Curtis



Rebekah Curtis, R.N.

Rebekah is the Health Education nurse at Heritage Victor Valley Medical Group. As a registered nurse and member of the American Association of Diabetes Educators, Rebekah conducts regular training and classes.

To read this article in full, and for other helpful words on food, disease prevention and fit living, visit www.hvvmg.com.

To contact Rebekah Curtis directly, you can email her at rcurtis@hvvmg.com.



In today's world, we are more stressed and overwhelmed than ever. Digital input bombards our senses almost every second of our waking hours.

Growing up in the '70s and '80s, I remember my grandparents taking me to see the first "Star Wars" movie. When Yoda was introduced in "The Empire Strikes Back," the idea of focusing a Jedi's mental energy fascinated me. For a kid like Luke Skywalker who didn't have much, it was the one weapon he could call on at any time. He couldn't lose it to Darth Vader unless he let his guard down, and he could strengthen and develop it himself with practice. The ability to focus awareness to influence how you respond to the world is a powerful thing. In real life, it's sometimes hard to navigate without periodic introspection. Many heroes from our youth often had some special ability or power. That "super power" often was the ability to gain insight into the world around them to be able to carry out their mission. While most of us aren't called on to save the universe, we can improve our ability to change how

we respond to our lives and our world through mindfulness. The next thing on your mind might be, "How does just being more mindful help me in 2017 — modern day America?"

Ever driven somewhere and then arrived at your destination and thought, "Wow, I don't remember the trip here!" Your awareness in those moments was focused on something other than the task at hand – driving. Once you learn to identify and harness your awareness, you can learn to focus it on the things that you want to be more aware of: eating habits, emotional state or amount of daily stress. That's where the real change happens. Remember that resolution you made in January? Have you already broken it? Statistics from the website The Statistic Brain show that well over half of people break their New Year's resolution within six months, so don't feel bad.

Mindfulness can be that internal personal motivation that helps us identify when we have stopped short of our resolutions and gives us enough "oomph" to keep us headed toward positive change. It can help us take back some of our personal control that we may have lost, be happier and more committed to the person we want to become. If we become more mindful, allowing decisions and behaviors to come from a relaxed, calm, balanced place, wouldn't that be a better world for us all?

DIABETES SCREENING EVENT PROVES A POSSIBLE LIFESAVER FOR TWO IN COACHELLA

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Desert Oasis Healthcare

On Tuesday, March 28, more than 140 people decided to change their health for the better by attending the Alert Day Health Fair at Coachella, where Desert Oasis Healthcare has a Primary Care location.



Many of us have a friend or family member living with diabetes but may have never thought about our own risk for the disease.

That being said, more than 140 people decided to change that on Tuesday, March 28 during Coachella when they attended the Alert Day Health Fair in the parking lot of the Food4Less store at 49241 Grapefruit Blvd., where Desert Oasis Healthcare (DOHC) has a Primary Care location.

Two of those tested showed dangerously high blood sugar and were taken to a nearby hospital. “It’s days like this that make you glad you’re a healthcare professional because we helped bring awareness about a potentially serious health concern to many people, particularly the two who were unaware of having such high blood sugar,” said Teresa Hodgkins, Pharm.D. and VP of Clinical Quality Initiatives for DOHC.

“9 out of 10 Americans most at-risk for type 2 diabetes don’t know it.* That’s the value of this day and why

we were so happy to participate in this important event.”

Staff members of DOHC’s Medication Management Department tested blood pressure, blood sugar, and body mass index (BMI). Those tested were also counseled on the importance of knowing the signs and symptoms, as well as the risk factors for diabetes and pre-diabetes.

Prevention and early diagnosis is critical in the successful treatment of the disease, which is a serious global health concern.

Other participants at the Alert Day Health Fair included the American Diabetes Foundation, FIND Food Bank, Walgreens, Clinicas de Salud del Pueblo, Volunteers in Medicine, Brian Billhartz Insurance, Inter Valley Health Plan, South Bay Health & Insurance Services, and KUNA-FM.

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Heritage Provider Network

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Northridge, CA 91325-5810

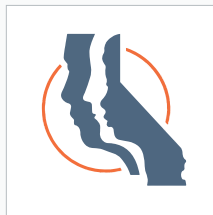
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Our Awards

RECOGNITION OF COMMITMENT AND EXCELLENCE

The recognition we have received demonstrates our practices in excellence. We're proud to be awarded for our commitment to our members and our community.



Wellness Excellence Award in Health Education - Southern California Foundation for Health Care



Top Ten Physician Medical Network in California by the California Association of Physician Groups



Elite Status of Excellence for the Standards of Medical Care by the California Association of Physician Groups



Recognized by the Integrated Healthcare Association (IHA) for our diabetic registries



NCQA Certification for Credentialing