



HIGH SCHOOL STEM PROGRAM

SEEING SCIENCE DIFFERENTLY

New in 2021, we are excited to host Pasadena's first biomedical research High School STEM Program! We received applications and teacher recommendations from 12 juniors and seniors in the Pasadena Unified School District, and we are anxiously awaiting the start of our inaugural program in June. Per covid restrictions, we are planning for the six-week immersive experience to be virtual; however, we are prepared to shift to an in-person format as conditions allow.

STEM programs are designed for students who are seeking exposure to the disciplines of Science, Technology, Engineering and Mathematics. These learning opportunities are geared toward students who may not otherwise have access to interactive educational programs in these fields. Led by Dr. Nicole Purcell, our newest cardiovascular scientist, HMRI's STEM program will explore new and uncharted solutions to some of healthcare's biggest challenges, like heart disease, Alzheimer's and mental illness. Participants will delve into a new topic each week, complete with hands-on lab activities and guidance from our passionate and accomplished scientific researchers.



TELLING OUR STORY

SHELLY AGUDA, ADMINISTRATIVE ASSISTANT

Shelly came to HMRI seeking two things: a deeper knowledge of the aging brain, and a culture of diversity and inclusion. As research administrative assistant to Dr. Harrington, she's found both. "I wanted to find a non-profit organization with committed doctors who build community and are passionate about the aging brain. HMRI was the perfect fit." From a young age, Shelly was inspired to be curious about our brains and how they work, and to seek ways to care for people – thanks to her mother and grandmother, both of whom were in healthcare. Shelly became particularly interested in Alzheimer's and the aging brain while serving as activities coordinator for a local retirement community. Many of the residents were in memory care. "It was exciting for me to come up with ways to connect and interact with them," she says. At HMRI, Shelly's passion is fueled by neurosciences research, our unique staff, and the universal appreciation for each person's talents, regardless of race or sexuality. "HMRI has attracted accomplished scientists and staff from all around the world, and connecting with them and learning their stories – it's inspiring to me. We all have something to contribute. It's refreshing and exciting to work with a team that accepts you."



At HMRI, science looks a little different – and we like it that way. We're proud of the inclusive environment we've built and the diverse list of talents offered by our staff and scientists. This melting pot is part of what makes us a world-class research organization. Next quarter, we'll continue telling our story with another staff spotlight.



HMRI, REIMAGINED

A FOCUSED REBRANDING EXERCISE.

Imagine a world where nothing is impossible. Freethinking is encouraged. Science is unshackled. Cures are found. At HMRI, this is the world we've built. Innovative, life-changing solutions are happening today.

In spring 2020, we engaged a marketing and branding team to help us reimagine the HMRI brand. Our goal was to update the look and feel, as well as our brand messaging, to more accurately reflect who we are: a world-class biomedical research institute. After an "immersion period" of countless staff interviews, competitive research and creative conceiving, we were presented with a new "face" for our organization – and a voice that echoes the passion and commitment of all of us.

The foundation of the new visuals stemmed from our three areas of focus: the heart, the brain, and the intersection of the two. In newly rebranded pieces, like our website and this newsletter, you may notice three "pillars" that overlap and intersect – symbolic of the way our research areas overlap and intersect in the body. The design is clean and minimalist with abundant white space, much like our new building. Lifestyle photos were chosen to represent the broad spectrum of people that our research may help – not only here in Pasadena, but across the globe. And you'll see no fear or anxiety on their faces – only hope.

Passion and hope are the biggest themes in the new brand messaging. As we tell the story of HMRI, we hope to paint a picture of the truly exciting work that is happening here every day. Work that we are passionate about – work that has the potential to improve the lives of so many.

Now that the new website is live, we're shifting focus to updating printed materials, developing a new fundraising platform, and building a strong presence on social media – be sure to follow us on Facebook and Instagram for the latest and greatest at HMRI.



- twitter.com/hmri_pasadena
- facebook.com/hmripasadena
- instagram.com/hmri_pasadena
- linkedin.com/hmri--huntington-medical-research-institutes

VISIT NOW



FUELING DREAMS.

DO YOU SHARE OUR PASSION? JOIN US.

Beating 100,000 times a day, the heart pumps blood and oxygen through a 60,000-mile-long network of vessels. It sustains life, working without ceasing, yet a list of maladies can stop it in minutes, or even instantly. Death is widely accepted as a fixed outcome for events like massive heart attack and traumatic blood loss. But at HMRI, we see science differently. We're finding ways to reduce the size of heart attacks, increasing the odds that we might survive them. Ways to train our bodies to survive devastating blood loss. Our scientists enter the lab each morning with excitement and determination, because the potential is huge: millions of lives saved.

DONATE NOW



If you would like to be removed from our mail list, please email us at communications@hmri.org with your name and address.



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HMRI

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APRIL/JUNE NEWSLETTER

HMRI.ORG



A LETTER FROM OUR CEO

BUILDING CONNECTIONS

Friends, we are thrilled to introduce you to HMRI's new quarterly newsletter – part of our commitment to creating meaningful connection with our supporters and stakeholders. As we head into spring, we are embarking on many new things in 2021. While we cannot ignore the reality that we have been living amid a global pandemic for a full year, we have remained focused on the key components of our strategy: continuing our research, engaging our community, and funding the important work happening at HMRI. We continue to pursue federal and private foundation grants and create new mission-aligned revenue opportunities, such as acquiring intellectual property, clinical trial support, and optimizing the use of our facilities. All the while, we are helping people gain a deeper understanding of the heart and brain, offering educational programs for children and adults alike.

Much was accomplished in 2020, despite layers of difficulty added by the pandemic. We secured 11 new competitive grants to fund our research, engaged with donors and raised approximately \$1M in unrestricted support, and we hired two new mid-career scientists:

Dr. Anju Vasudevan and Dr. Nicole Purcell. Additionally, our scientists achieved 50 peer-reviewed publications and 36 peer-reviewed presentations at scientific meetings, and we began preparing for our formal postdoctoral and STEM education programs – both new in 2021.

Another exciting product of 2020 has been a targeted rebranding effort. HMRI has long been considered “the best kept secret in Pasadena,” and we are working very diligently to change that. In March we launched our new website at Hmri.org, and we are engaging several other communications tools, including this newsletter and social media outlets like Facebook and Instagram to better tell our story. Along with the updated look and feel, you might notice some new brand messaging. One element of this is Science Unshackled. What an exciting ideal Science, unbound by the constraints that are typical in an academic research environment. Our independent status allows us to be nimble, making quick and efficient moves to develop groundbreaking diagnostic tools and treatments. There is less “red tape” and perhaps greater opportunity to test theories and explore the unknowns surrounding the heart, the brain, and the intersection of the two.

HMRI is a leading independent biomedical research institute. We are proud of the meaningful work that is happening here, and we are especially proud of our people – a talented, diverse group of scientists and staff who make it all happen. And we are grateful for you, our community of supporters. May 2021 be our best year yet.

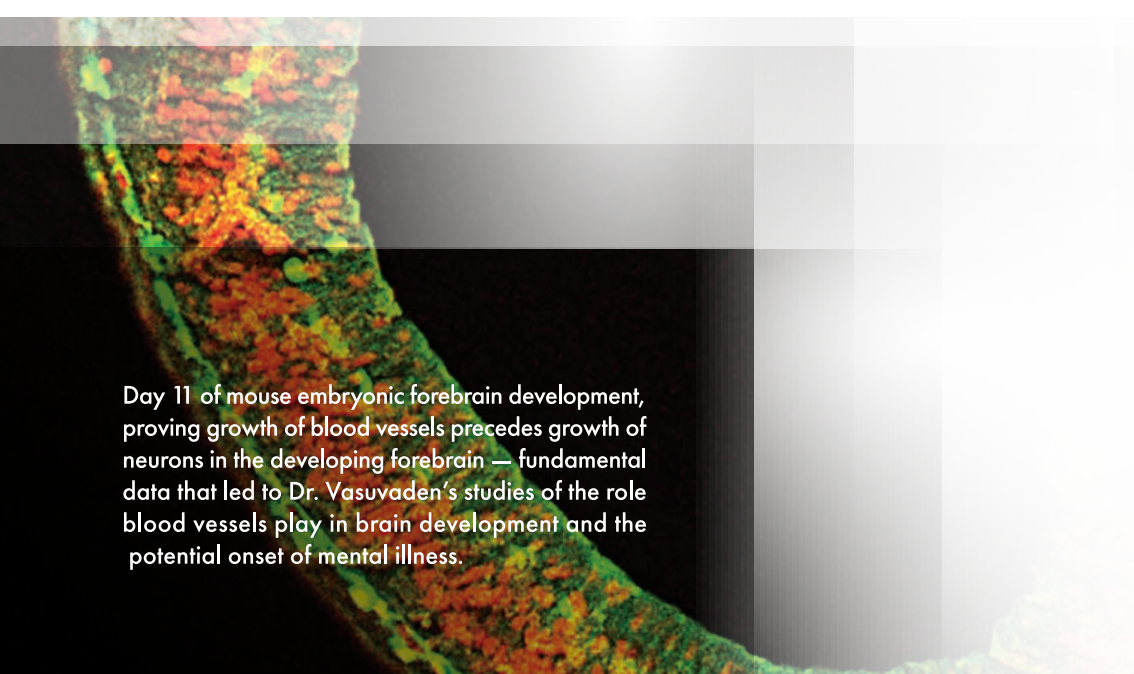
Julia E. Bradsher, PhD, MBA, MS
President and Chief Executive Officer



2020 RECAP

BEYOND WHAT'S IMAGINABLE.

Despite the challenges of the pandemic, 2020 has been a year of excitement and progress for HMRI! Our Neurosciences Research team piloted a study that revealed abnormal brain waves in healthy populations who are at risk for Alzheimer's – information that could lead to earlier diagnoses and interventions. Meanwhile, our Cardiovascular Research team uncovered the risk of lung damage brought on by vaping, while also studying several intersections of COVID-19 and cardiovascular disease – providing lifesaving insights that could help those who are doubly impacted. Beyond the heart and the brain, we have internationally renowned physician-scientists advancing their research at HMRI in post-surgical pain management, colorectal and anal cancer, pelvic floor disorders, liver disease and more. Every day, big-impact, game-changing science is happening at HMRI.



Day 11 of mouse embryonic forebrain development, proving growth of blood vessels precedes growth of neurons in the developing forebrain – fundamental data that led to Dr. Vasudevan's studies of the role blood vessels play in brain development and the potential onset of mental illness.

2020 also brought us two very accomplished scientists – both of whom moved their research labs to HMRI. Anju Vasudevan, PhD, joined us in June 2020 to create our first Neurovascular Research team. Anju and her team study brain development and the development of new blood vessels (angiogenesis). They've made exciting discoveries surrounding the repair of abnormal blood vessels to normalize brain development – and potentially prevent the origin of mental illness. With one in four Americans (and 300 million worldwide) suffering from some type of mental illness, these studies have the potential to provide life-changing opportunities for the next generation. Additionally, Nicole Purcell, PhD, was hired in the fall of 2020 to join our cardiovascular research team. She relocated her lab to HMRI in January 2021 to advance her studies of therapeutically targeting newly discovered phosphatase (PHLPP) that impacts the physiology and pathophysiology of the heart and brain. Passionate about training and nurturing the next generation of scientists and doctors, Nicole will also serve as director of HMRI's inaugural STEM Program for high school students in the community, as well as our undergraduate student programs.



POSTDOCTORAL FELLOWSHIP PROGRAM

INSPIRING THE NEXT GENERATION

We are thrilled to launch a formal postdoctoral fellowship program in 2021, thanks to a transformational grant we received from a generous supporter. With a mission of training and inspiring the next generation of independent researchers, HMRI will offer a handful of postdoctoral scientists an opportunity to perform cutting-edge research alongside our accomplished physician-scientists. In close collaboration with Caltech and the University of Southern California's Keck School of Medicine, this program will provide unique opportunities for fellows: one-on-one time with their supervisor, guaranteed salary support, funds to carry out their research, personalized training in each laboratory, adequate lab space, and a friendly environment that supports collaboration and interaction with supervisors, peers, and other senior scientists. Through innovative projects, new technologies, and multi-disciplinary collaborations, they'll investigate scientific questions surrounding widespread health concerns like aging and Alzheimer's disease, chronic migraine, heart development, heart attacks and heart failure, and mental illness. This program offers an opportunity for fellows to demonstrate originality, creativity and productivity – all of which will be primary contributors to a successful career in research. (And the best of the best could someday be scientists at HMRI!)



SCIENCE UNSHACKLED

WITH DR. MIKE HARRINGTON



Mike Harrington left Caltech 22 years ago to join HMRI as Scientific Director of Neurosciences. He wanted to freely explore the unknowns of the brain, with hopes of someday understanding the origins of Alzheimer's disease, dementia, migraine and other brain disorders. “I wanted to study people with brain disorders. We don't know the cause of any brain disease, which makes effective treatment near impossible! I wanted to bring people in from the community, who I could repeatedly test and study over the course of time. I really didn't see where that would be easy to facilitate at a university.” Most medical schools require researchers to study the patients going through their system, as opposed to opening the study to a broader base of participants. Oftentimes, researchers must also stay within the schools' predetermined areas of focus and commitments, as well as splitting their time between research and academic and/or clinical responsibilities. “With HMRI, I'm able to fully focus on my research,” says Mike. “I believe our biggest resource is local study participants, and the freedoms that come with working outside the confines that are typical in a medical research center. It's a privilege.” **Dr. Harrington was awarded a \$1 million grant from the prestigious Keck Foundation to advance his research on sodium's role in migraine. The Keck Foundation funds only “paradigm-shifting medical and scientific research with the potential to break open new territory in their field.”**



SHARE OUR PASSION

COMMUNITY EVENTS AT HMRI.

As scientists, education is a cornerstone of who we are. We offer educational opportunities for members of our community to share in the scientific advancements happening everyday at HMRI. Whether virtually or in person, we invite you to come see it for yourself.

BOB MACKIN MEMORIAL SCIENTIFIC LECTURES

- April 20 @ 4pm – Gabriel Akopian
“Immune Response to Colorectal Cancer”
- May 18 @ 4pm – Dr. Michael Harrington
“The brain is wider than the sky, for, put them side by side The one the other will include, with ease, and you beside.”—Emily Dickinson
- June 15 @ 4pm – Dr. Wangde Dai and Dr. Jianru Shi
“Studies in New Therapies for Experimental Hemorrhagic”

RESEARCHERS ROUNDTABLE

- April 13 @ 4:00 pm – Dr. Howard Kaufman
“Colorectal Cancer 2021: New Screening Recommendations & the Role of Opioids in Cancer Development and Treatment”
- June 29 @ 4:00pm – Meet HMRI's Postdoctoral Fellows!



PASSIONATE SUPPORTERS

SANDRA B. SHARP, PhD, HMRI BOARD OF DIRECTORS

We're fortunate to welcome Sandra Sharp, PhD, as one of the newest members of our Board of Directors. Sandra is Professor Emerita, Biological Sciences, at Cal State LA – but even in retirement, her work continues, as she advances her molecular myogenesis research.

“I feel privileged and honored to be associated as a board member with HMRI. For me, it's a no-brainer. HMRI is made stellar by its ground-breaking research undertaken to impact the lives of patients and by its contribution to the professional pipeline through the opportunities it affords biomedical scientists from diverse backgrounds and at all career stages. I look forward to using the experience I've accumulated in research and education to help keep HMRI strong and to solidify its role as part of the greater Pasadena community.”



As a non-profit, HMRI relies on the time, talent and treasures of our many supporters. We are grateful for Sandy Sharp and the other members of our Board of Directors, who share our passion for improving lives through biomedical research. Look for another passionate supporter in our next quarterly newsletter!