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BUILDING A PIPELINE FROM DISCOVERY TO NEW MODELS OF CARE

Research Investment Accelerates UVA's Prostate Cancer Program

THOSE WHO KNOW CHARLES BURNETT III by his passion for fast boats and antique military vehicles may be surprised by his latest investment. His \$1 million gift for prostate cancer research, however, may give the self-styled businessman and philanthropist his best return ever.

The second leading cause of cancer-related deaths among U.S. men, prostate cancer is slow-growing but persistent. Scientists know that androgen receptors, cells in the prostate that are activated by the male hormone androgen (also called testosterone), play a critical role in the onset and progression of prostate cancer. Current treatments focus on depleting or blocking androgens, which ultimately fails, since the cancer finds other pathways for activating the androgen receptor.

James Larner, MD (MED '80), professor and chair of radiation oncology at UVA, focuses his research on a

different approach. His team looks at ways to degrade androgen receptors.

"If we can target players in pathway to selectively promote degradation of the androgen receptor, we can control the growth of prostate cancer," says Larner. "This is a novel approach of targeting the pathway, rather than trying to block androgen receptors."

Larner's idea has huge potential, but it's complex and still in the early stages of investigation. Unfortunately, the big federal grant funders, like the National Institutes of Health and the National Cancer Institute, rarely fund early-phase research, focusing their resources on well-established concepts. That's where individuals like Burnett come in.

"Early-stage funding is essential to spawn new ideas and collaborations," says Larner. "Support for this initial exploratory phase will give us the information we need to proceed toward major grant funding, and,

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These exceptional physicians and scientists, when supported by generous partners like Charles Burnett, will change forever how we manage prostate cancer.

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IN THIS ISSUE



Support for faculty startup packages helps attract outstanding professors like Jeongok Logan, a Roberts Scholar who conducts research on arterial stiffness.

PHOTOGRAPH © PEGGY HARRISON

A GAME-CHANGING GIFT

Nursing Alumni Association Supports Faculty

LOOMING SHORTAGES OF BOTH NURSES AND NURSING EDUCATORS have received lots of press lately, and for good reason: Tens of thousands of would-be nursing students are turned away each year due to space constraints and an increasingly short supply of nursing faculty to teach them.

At UVA, the situation is even more critical, with older-than-average professors and the loss of one-third of the faculty over the last eight years due to retirements and relocations. A half-dozen more retirements are expected in the next two years. Couple that with the need for incentives to attract the highest-caliber teachers, who are also being recruited by other top nursing schools, and it's the perfect storm.

The School of Nursing Alumni Association understands help is needed—and soon. To honor its centennial, the association recently committed the largest gift in its history: \$100,000 for faculty startup packages, payable over three years.

"This is a game-changing gift," stresses Dean Dorrie K. Fontaine. "In a time of great transition for nursing academics—when their scarcity makes them so highly sought-after—we're not only hanging onto the exceptional people we have, we're attracting more of them. We simply couldn't do that without this money and support."

The Alumni Association has a history, almost as old as itself, of making transformative gifts to the school's faculty. A \$3,000 gift in 1927—equivalent to more than \$40,000 today—helped the Virginia Graduate Nurses Association establish the Sadie Heath Cabaniss School of Nursing at UVA, the first BSN program in the South. A year later, thanks to support from many alumni and nurses, the school became home to the first endowed nursing professorship in the United States.

"Since its inception 100 years ago, the Alumni Association has focused on

Pipeline of Discovery—continued from page 1

eventually, create a pipeline to clinical trials. We need individuals like Charles Burnett—forward-thinkers who like to 'go deep' and fund new ideas, people who are willing to think big and take risks that bring us closer to new treatments and cures for prostate cancer."

The two men's shared commitment to this research developed when Larner gained Burnett's trust and respect while caring for his mother. It was that care, along with a keen interest in understanding the underlying reasons why therapies succeed or fail, the "going deep," that led to Burnett's personal investment.

Larner's research is part of a growing expertise in prostate cancer at UVA—and Burnett's support is mirrored by a number of others, including the estate of Paul Mellon. Currently, multi-disciplinary teams of UVA researchers are working toward innovative ways to treat and slow the progress of prostate cancer.

"We have assembled a group of ambitious and knowledgeable investigators who collaborate in advancing new concepts in prostate cancer research," notes UVA Cancer Center Director Tom Loughran, Jr., MD. "Together, these exceptional physicians and scientists, when supported by generous partners like Charles Burnett, will change forever how we manage prostate cancer." ●

philanthropically supporting our students and alumni, even when nurses were making only \$3 per day," notes President Judy Bilicki (NURS '81). "One of the most impactful ways we can continue this support today is to ensure our dean has what she needs to recruit and retain the very best faculty for the School of Nursing. We feel this gift will help accomplish that goal."

Newer faculty members like Jeongok Logan, Maureen Metzger, and Yasemin Turkman confirm the key role of startup packages, seed research funding, and other professional support in drawing them to the School—calling similar funds "a huge enticement," and "one of the reasons" they chose UVA.

The best part of this latest gift is that the funds can be put to use right away in attracting new faculty members. The association hopes this milestone gift will inspire others to give with similar generosity to the School and its faculty—this year and in years to come. ●

IN THE SPOTLIGHT

LAWRENCE G. LUM, MD, DSC

ARMING CELLS TO DESTROY CANCER

UVA is pioneering a new way to fight cancer, thanks to the recruitment of Dr. Lawrence Lum. Lum's cancer-fighting immunotherapy has the potential to destroy cancer cells in various parts of the body, and possibly even target immune-related diseases beyond cancer—all on an outpatient basis.

Cancer immunotherapy works by utilizing a patient's T cells, which are already programmed to destroy abnormal cells. Grown in the laboratory, the T cells are then directed to target cancer cells. Lum's method is unique in how he directs the T cells by linking two antibodies that bind to both T cells and tumor cells and form a killing bridge between the two. Development of this targeting platform allows the procedure to be done simply and adapted quickly to different cancers. Infusions of the targeted T cells create a lasting immunity by vaccinating patients against their own tumors.

PHYSICIANS FOR THE FUTURE

With his combination of clinical and research skills, Lum exemplifies a new and growing breed of physicians who are actively involved in research. David Wilkes, MD, dean of UVA's School of Medicine, is committed to bringing more physician-scientists on board, aiming for 32 strategic hires in the next four years. These recruits will fall in cancer, neurosciences, and cardiovascular disease, and in the growing disciplines of organ transplant, regenerative medicine, metabolic disorders, and precision medicine.

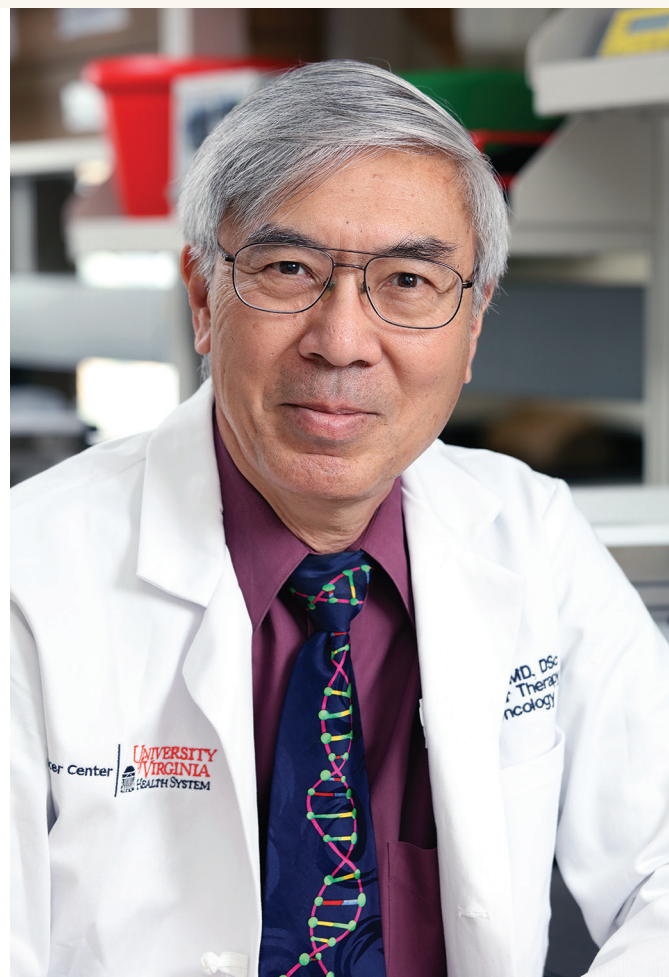
"By growing our team of exceptional physician-scientists, we stand poised to bridge the gap between world-class science and breakthrough innovation for patients," says Wilkes.

The school hopes to join with philanthropic partners to accelerate progress on these recruitments that will lead to new treatments and therapies for patients.

REALIZING THE DREAM

Lum has spent his career seeking innovative treatments for patients. As a young man, he dreamt of being like Albert Schweitzer, a Nobel prize-winning physician, musician, theologian, and researcher. He wanted to make a difference. At UVA, he will collaborate with talented colleagues and build a pioneering cell therapy program. But his first priorities are to get clinical trials up and running for breast cancer, neuroblastoma (a childhood cancer), and pancreatic cancer, so he can see a drug he has pioneered be approved for general use.

"With UVA's support, I have the opportunity to help real patients and get this drug approved by FDA," says Lum. "That's following the dream and making a difference."



PHOTOGRAPH © TOM COGILL

IMPACT

Immunotherapy can be used to treat any solid body tumor, including lung, ovarian (stage 3 or metastatic), prostate, brain (glioblastoma), pancreas, breast (including triple negative), and some common childhood cancers. In one trial, patients with incurable metastatic breast cancer who received infusions of activated T cells had an overall survival rate nearly twice as long as patients who received conventional treatment. In a second trial, patients with incurable pancreatic cancer had an overall survival rate three times as long as patients who received conventional therapy.

"This will put UVA on the map. We'll be up there with the top ten centers in the nation in cellular therapy. That's good news for patients everywhere."



Dr. JoAnn Pinkerton (left) and Renee Grisham share a passion for providing up-to-date health information to midlife women.

PHOTOGRAPHS © GITCHELL'S STUDIO



Some 230 women check in at the recent spring program.

WOMEN TAKING CHARGE OF THEIR LIVES AND HEALTH

Oakwood Foundation Supports Midlife Health Symposium

LAST MONTH, MORE THAN 230 WOMEN CAME together in Charlottesville to learn more about taking charge of their own health. They left more knowledgeable and confident.

“The symposium helps me feel more comfortable in starting a dialogue with my doctor about my concerns,” said a woman in her sixties. “I love learning about menopausal issues in a supportive environment that makes me want to share what I learn with my friends.”

Some 43 million women in the United States are currently reaching or in menopause, often with troubling menopausal symptoms. For the fourth year in a row, UVA’s Midlife Health Center has organized a spring educational symposium on women’s midlife health. With presentations ranging from the science of menopause and heart health to the benefits of mindfulness and yoga, the symposia offer something for everyone. The spring Women’s Midlife Health Symposium provides new and in-depth healthcare information for Midlife Center patients and friends. A fall symposium serves community women who may have limited access to critically needed health education. Together, these programs offer women up-to-date health information that is free and available to all.

The symposia are the brainchild of JoAnn Pinkerton, MD, director of UVA’s Midlife Health Center, one of the few centers in the country to specialize in caring for women over 40. Pinkerton is also executive director of the North American Menopause Society. The symposia are funded through the JoAnn Pinkerton Midlife Health Education Endowment, made possible by the philanthropic support of the Charlottesville-based Oakwood Foundation Charitable Trust.

“Increasingly, UVA is a leading site nationally for expertise in women’s health,” says Pinkerton. “Women in Charlottesville and the surrounding area deserve to be on the cutting-edge of what’s



Dr. Brandy Patterson addresses some of the 160 women who attended the fall symposium at Mt. Zion First African Baptist Church.

new and what’s coming in women’s health. I’m grateful for the Oakwood Foundation’s support and for our many other donors, including Stuart and Betsy Houston, and for the hard work and tireless efforts of our volunteer committees who help make the educational programs possible.”

“John and I value the importance of providing accurate and up-to-date health information to midlife women from all walks of life,” says Renee Grisham, a representative of the Oakwood Foundation, co-founder of the symposia, and a driving force in expanding the program to the community. “It’s inspiring to see so many women who are passionate about living their lives to the fullest and improving their health. We’re fortunate to have in Dr. Pinkerton a leading women’s health expert who is committed to sharing her knowledge.”

Looking ahead, Pinkerton hopes to create a research endowment for the Midlife Health Center aimed at generating new midlife health knowledge and pioneering cutting-edge clinical trials to test novel therapies for menopausal women. ●

PUTTING GRADUATE STUDENTS' DREAMS WITHIN REACH

Challenge Gift Honors Microbiology Professors and Mentors Tom and Sally Parsons



The Parsons Fellowship will offer much-needed support for graduate microbiology students and provide key resources for professors like Amy Bouton (center).

PHOTOGRAPH © STEPHANIE GROSS

FOR ANTHONY ROSSOMANDO, having strong mentors during his doctoral studies at UVA helped him launch a successful career in biotechnology research and development.

“Mentors put graduate students on the right path,” says Rossomando, who earned his PhD in 1991. “They teach you everything from how to seek out the information you need to how to set up the right experiments. They offer advice, and it stays with you throughout your career.”

To express his gratitude for his UVA mentors, Rossomando made a gift of \$110,000 to support the Tom and Sally Parsons Fellowship in Microbiology. He challenges other doctoral students to join him in honoring the now-retired microbiology professors for their dedication to teaching and their significant contributions to cancer research.

Both of the Parsons, along with Rossomando’s mentor Michael Weber, professor of microbiology, immunology and cancer biology, served as his thesis advisers—a team he affectionately calls PWP, or Parsons Weber Parsons. Weber has also made a significant contribution to the Parsons Fellowship to help UVA attract and retain bright young scientists interested in basic biology and human disease.

“Tom and Sally Parsons made significant contributions to cancer research and brought recognition and new talent to UVA because of their excellent work,” says Kodi Ravichandran, current chair of the department. “It’s inspiring to see how they have mentored young scientists and to see the generosity of Tony Rossomando.”

Rossomando, only the second person in his family to graduate from college, knows the difference fellowships can make for graduate students. As a young, married father with a toddler in the late 1980s, he wasn’t sure he could afford graduate school. A presidential fellowship award put his dream within reach.

After graduating from UVA, Rossomando completed postdoctoral studies at Cold Spring Harbor Laboratory. He has worked for a number of companies, including Bayer Pharmaceuticals, Biogen, Alnylam Pharmaceuticals, and Synageva BioPharma Corp., recently acquired by Alexion. Rossomando currently works with Alexion, which has made a matching contribution to the Parsons Fellowship. The author of numerous publications, Rossomando also developed a molecule that has now been commercialized in several countries.

Rossomando hopes the Parsons Fellowship will soon be fully funded at \$250,000 for



Tony Rossomando’s challenge gift for the Parsons Fellowship honors his mentors and opens doors for future students.

promising graduate students with financial need—a fitting tribute to a couple whose dedication to science inspired their students.

“Tom Parsons had a sign in his office that read, ‘You snooze, you lose,’” Rossomando says. “I took that to heart, realizing you have to work hard to be successful. And I saw that in Tom. Sally was a big influence because she really cared for students. She was smart and capable, contributing to our work and offering support in thesis committee meetings. I wanted to give to the Parsons Fellowship to express gratitude for my time at UVA, and for the fellowship that made my education possible.” ●

PART OF THE FAMILY

Marshall's Gratitude to UVA Children's Hospital Becomes a Community Movement



Ginny and Jennifer Marshall (left and right) share a moment with their favorite doctor, Kim Dunsmore, at a Jennifer Fund Golf Tournament to support pediatric cancer research.

IT WAS THE SUNDAY BEFORE ELEVEN-YEAR-OLD JENNIFER MARSHALL was to start middle school. She had been running a fever and not feeling well the week prior, so her mother Ginny Marshall decided to take Jennifer to their local emergency room in Blacksburg, VA.

"I remember suspecting an ear infection," Ginny says. "After doing some bloodwork, the doctors told me to take Jennifer to UVA Children's Hospital immediately—and pack a bag for at least a ten-day stay. My heart dropped."

Kim Dunsmore, MD, met Ginny and her husband Steve minutes after they arrived at UVA and talked them through Jennifer's diagnosis—acute lymphoblastic leukemia, or ALL.

"Kim told us, 'We're going to get to know each other really well,'" Ginny says. "She asked us questions about Jennifer and her siblings, Danielle and Aaron. We realized we had just met a very special doctor, and Kim quickly became a part of our family."

For the next three years, Jennifer and her family were in and out of UVA Children's Hospital until her treatment ended in March of 1999.

"The care we received at UVA Children's Hospital was so personal," Steve says. "We were always asked how all of our children were doing, not just Jennifer. That was so important to us, because a disease like cancer becomes a family disease. Everyone is so involved, and every family member is changed forever because of it."

After seeing a news story about a Boston family who started a fund for their local children's hospital, Ginny and Steve thought, "Why not us?" Soon after, the Jennifer Fund was created.

"Through their organization, the Marshalls want to help other families and give back to the research and care that helped save their daughter's life," Dunsmore says.

The Jennifer Fund quickly became an organization that both the Blacksburg and Charlottesville communities rallied behind.

"We had casino nights, a car auction, a car wash," Steve says. "One of my favorite memories is the Jennifer Fund car, a professional sports car covered with digitalized, glow-in-the-dark handprints from patients at UVA Children's Hospital."

Part of the organization's success is the Jennifer Fund Golf Tournament, held annually since its creation in 1997 by the Marshalls' good friend, Ronnie Thompson. The year Thompson passed away from leukemia, the golf tournament raised enough funds to name a room in the Battle Building at UVA Children's Hospital after him.

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The care we received at UVA Children's Hospital was so personal. ... Everyone is so involved and every family member is changed forever because of it.

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"Last year, we got a call that the fund had hit the million-dollar mark," Ginny says. "We started with \$20 here and there, and every bit has made a difference. To reach one million is incredible."

The Jennifer Fund's most recent initiative is a \$120,000 pledge to fund a pediatric hematology/oncology fellowship on Dunsmore's team.

"Kim wants to have the best cancer program for children in Virginia, a goal that includes various puzzle pieces," Ginny explains. "A fellow is the last piece of that puzzle."

Along with learning to take care of patients and families, the fellow will research immunotherapy, a type of treatment that uses the body's natural defenses to fight cancer.

"The Marshalls' support has been invaluable," Dunsmore emphasizes. "But it's not just the dollar support, it's the actual support from the family. They help us to understand and remember why we do the work we do." ●



Through the ziMS Foundation, Cheryl Zimmerman (center) and her family are striking back against multiple sclerosis.

PHOTOGRAPH © COE SWEET

KNOCKING MS OUT OF THE PARK

ziMS Foundation Supports UVA's Fight Against Multiple Sclerosis

RYAN ZIMMERMAN, A FIRST BASEMAN FOR THE WASHINGTON NATIONALS, understands first-hand the impact of multiple sclerosis (MS) on patients and their families. In 1995, when Ryan was just 11 years old, his mother Cheryl was diagnosed with the debilitating disease of the central nervous system. He and younger brother Shawn grew up witnessing the devastating toll of MS as their mother gradually lost the ability to walk, to perform fine motor tasks, and to carry out daily needs such as eating and showering. Ryan decided that someday he wanted to help others dealing with MS.

A former standout on the UVA's baseball team, Ryan established the ziMS Foundation in 2006—a year after he was drafted to the Nationals—to support MS research and education programs. Since 2008, the foundation has contributed more than \$1 million to UVA's Department of Neurology to fund research, clinical services, and fellowships for the James Q. Miller Multiple Sclerosis Clinic. UVA has been the foundation's top beneficiary.

"My family gave me the support to fulfill my dreams, and the Washington Nationals gave me the opportunity to play the game I love at the highest level in our nation's Capitol," says Ryan, a member of UVA's Class of 2006 and president of ziMS Foundation. "I am thrilled to have launched a foundation that can make a real impact in the life of my family, as well as many others afflicted by MS."



PHOTOGRAPH © COE SWEET

The ziMS Foundation hosts a number of fundraising efforts each year, including Strike Down MS, an annual bowling event in Charlottesville that supports UVA's MS program. As UVA strives to attain national prominence in MS care and clinical research, the ziMS Foundation partnership has proved extremely valuable.

"The ziMS Foundation support has been critical as we continue to build a program that includes exceptional providers, diverse research opportunities, and successful partnerships with our patients," says UVA neurologist Myla Goldman. "The foundation has supported our team's expansion, to most recently include a pediatric MS specialist. We have also been able to support the development and training of providers in whom we are fostering a lifetime commitment to MS-centered care. Our current healthcare system is not designed to support the multifaceted needs of a complex, chronically ill population, like we have in MS. Philanthropic support allows us to focus on what we think is best for our patients and their families and to feed the pipeline of future MS therapeutics and providers." ●

DID YOU KNOW?

NEUROLOGY RESEARCH THRIVES AT UVA

UVA's Department of Neurology ranks 10th in NIH funding among neurology departments across the country, according to the Blue Ridge Institute for Medical Research. UVA has strong programs in patient-centered, clinical research as well as early-stage laboratory and translational research. UVA Neurology is currently leading two major national neurological clinical trials. Additionally, Jaideep Kapur, MBBS, PhD—the Eugene Meyer III Professor of Neuroscience and Professor of Neurology at UVA—ranks 7th nationally in funding from the NIH.

"Part of the purpose of these funds is to act as an incubator for the next generation of researchers," says Karen Johnston, MD, Harrison Distinguished Professor and Chair of Neurology.

"We have great hope for the future of our research and for the impact we can have, both on patients and discovery."

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PULSE

PHILANTHROPY IN ACTION AT UNIVERSITY OF VIRGINIA HEALTH SYSTEM

PARTNERS IN HEALTH

Why a UVA Nurse is Giving Back

DEBRA OWENS LEADS A BUSY LIFE. Right before Easter last year, Owens—a mother, wife, nurse practitioner, and manager of the Neonatal Intensive Care Unit at UVA Children's Hospital—was responsible for caring for many people. Then she developed a severe headache and noticed a drooping of her right eyelid.

Owens turned to her colleagues at UVA for help and learned that the carotid artery in her neck, one of the main vessels supplying blood and oxygen to the brain, was dissected and almost completely blocked. Carotid artery dissection is a major cause of stroke in children and young to middle-aged adults. Thanks to the early diagnosis and treatment she received at UVA, Owens is on the path to full recovery and now serves as the director of UVA Children's Hospital and Women's Services.

Owens wanted to do something to show her gratitude for the exceptional care she received — and she wanted to help the next patient. She turned to UVA Health System's new social giving platform, **Get Involved**, to help plan an event that would support healthy lifestyles and raise awareness for carotid artery dissection and young stroke.

"I love spin classes," she explains, "and I thought that we could partner with a gym in Richmond to support lifesaving research in UVA's Stroke Center. I was able to combine something that I was active in with a cause



PHOTOGRAPH BY LEE FLEISHER

that's close to my heart."

Every day hundreds of people like Owens see a need at UVA and seek to fill it. They support our efforts by outright gifts to programs, memorial gifts to honor a loved one or caregiver, or by hosting or participating in events that advance our mission.

For individuals like Deb Owens, giving something back is especially meaningful. For UVA, strong community support helps ensure that state-of-the-art, comprehensive care is always available—whenever you need it. ●

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