Dear Neighbors,

I hope you and your loved ones are happy, healthy, and looking forward to the year ahead.

As I write this note in late January, both Princeton University and the Municipality of Princeton continue to navigate the latest set of challenges posed by COVID-19 and its variants.

Just as we did when we first confronted COVID-19 in 2020 and again when we reacted to the delta variant in 2021, we have responded in concert to reduce the threat of the omicron variant.

Over the past two years, we have collectively and tirelessly worked to support the health of our community. We are grateful to local officials for their partnership, expertise, and dedication. While there are still difficulties ahead, we are far better equipped against the virus today than when it first appeared.

I expect that, in the months ahead, we will be able to return to doing many of the things we have missed — and with fewer restrictions. For now, I’m pleased that our students and faculty have returned to classrooms and laboratories following the winter break, continuing the University’s vital scholarly mission. They are also returning to their favorite places in town, visiting the shops and restaurants that are essential to the vitality of the Princeton community and attending cultural events.

After the traditional Communiversity celebration was canceled for the last two years, I am delighted to hear of the Arts Council of Princeton’s plans for the monthlong April ARTS celebration. The University enthusiastically supports this celebration, and I hope that many of you will be able to attend.

While challenges remain, we will continue to face them together and venture ahead into spring with renewed hope and enthusiasm.

Sincerely,

Christopher L. Eisgruber
President
“Native America: In Translation” is latest showcase at Art on Hulfish gallery in downtown Princeton

As assistant vice president, Barr supports and manages a range of projects related to strategic initiatives, advancement, writing, research, and the Board of Trustees. Her responsibilities include supporting administrative and trustee committees, such as the Committee on Naming, the Faculty Advisory Committee on Diversity, and the Committee on Honorary Degrees.

“I’m honored to join the Office of the President and I look forward to helping advance the mission and strategic initiatives of the University,” said Barr. “Education was the difference maker in my life, so serving as a higher education administrator is especially meaningful to me and I’m grateful to be able to do so at an institution for which I have such high regard.”

At Michigan State, Barr worked in the Office of the General Counsel before becoming a university officer with administrative responsibilities related to board meetings, university governance, and courtesies. She also taught a course on contract drafting as an adjunct professor at Michigan State University’s College of Law.

Prior to joining Michigan State, Barr served as chief municipal prosecutor for the City of Trenton. She also worked in the city’s law department as acting director and as assistant city attorney.

Nakia White Barr appointed assistant vice president in the Office of the President

Nakia White Barr, a former municipal attorney in Trenton and most recently secretary of the Board of Trustees at Michigan State University, has joined Princeton University as assistant vice president in the Office of the President.

“Nakia White Barr brings great strength to Princeton,” said Hilary A. Parker, the University’s vice president and secretary. “Her strategic perspective, broad expertise and deep commitment to the University’s mission will enhance our work in innumerable ways. It is a true pleasure to welcome her back to Mercer County, and I am confident that she will be a key partner to colleagues within and beyond the University as we work together to advance Princeton’s highest priorities.”

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Princeton breaks ground on Lake Campus development

In December, local officials joined members of the Princeton University community to break ground on the University’s Lake Campus development.

The Lake Campus development will be built on lands the University has owned for more than 100 years and will be the University’s first major campus expansion in West Windsor.

By 2023, the Lake Campus development will house more than 600 post docs and graduate students and feature a parking garage with more than 600 spaces and a co-exchange facility to heat and cool structures. A tennis and racquet center, a softball stadium, playing fields for rugby and recreational sports, and a new cross-country course will be built by 2025.

“People have appreciated the support of stakeholders and partners at the local, county and state level as we developed plans for this first phase of Lake Campus,” said Princeton University President Christopher L. Eisgruber. “We are especially appreciative of the warm welcome that we have received from officials in West Windsor.”

“I want to welcome Princeton University on behalf of everyone in West Windsor and look forward to a very long and productive partnership with all of you,” said West Windsor Mayor Hemant Marathe.

Other representatives from West Windsor in attendance included: Mercer County Commissioner Nina Melker, West Windsor Council President Andrea Mandel, West Windsor Council Member and Planning Board Liaison Linda Geene, West Windsor Council Members Mike Stevens and Sonia Gawa, and Mercer County Executive Brian Hughes, who offered remarks.

Princeton’s Executive Vice President Treby Williams hosted the Dec. 7 event, and Vice President for Facilities Kyujung Whang also offered remarks. After the initial phase of development is complete, the Lake Campus development will provide potential sites for locating world-class scientific facilities, Eisgruber said, enabling Princeton to strengthen the region’s innovation ecosystem and creating opportunities for academic partnerships with nonprofit, corporate, and government sectors.

“We look forward to continued engagement in future phases as we refine our vision for additional facilities that will advance the University’s mission and enhance our ability to make an impact on the world,” Eisgruber said.
New cancer therapy from Yibin Kang’s lab holds potential to switch off major types of cancer without side effects

I magine you could cure cancer by tar-
getting one tiny gene. Imagine that gene occurred in every major cancer, including breast, prostate, lung, liver and colon. Imagine that the gene is not es-
sential for healthy activity, so you could at-
tack it with few or no negative side effects.

Cancer biologist Yibin Kang has spent more than 15 years investigating a little-
known but deadly gene called MTDH, or metastatin, which enables cancer in two important ways — and which he can now disable, in mice and in human tissue, with a targeted experimental treatment that could be tested in human trials in a few years.

His work appears in two papers recently published in the journal Nature Cancer.

“You can’t find a drug target better than this: MTDH is important for most major human cancers, not important for normal cells, and it can be eliminated with no obvious side effects,” said Kang, Princeton’s Warner Lambert/Parke-Davis Professor of Molecular Biology and one of the principal investigators of the Princeton Branch of the Ludwig Institute for Cancer Research.

“In the two papers we are publishing back-to-back today, we identify a compound, show it is effective against cancer, and show that it is very, very effective when combined with chemotherapy and immunotherapy,” Kang said on Nov. 29, 2021. “Even though metastatic cancers are scary, by figuring out how they work — figuring out their dependency on certain key pathways like MTDH — we can attack them and make them susceptible to treatment.”

For years, Kang has focused on metasta-
sis — the term for cancer’s ability to spread from one place to another in the body — because he knows that metastasis makes cancer deadly.

“Metastatic breast cancer causes more than 40,000 deaths every year in the U.S.,” he said. “And the patients do not respond well to standard treatments, such as chemotherapies, targeted therapies and immunotherapies.”

Mingsheng Shen, an associate research scholar in Kang’s lab and the first author on both papers, “Our work identified a series of chemical compounds that could significantly enhance the chemotherapy and immunotherapy response rates in metastatic breast cancer mouse models. These compounds have great therapeutic potential.”

“Kang and his team found a key to unlock a possible solution to the challenge of cancer metastasis, the primary cause of death due to cancer,” said Chi Van Dang, the scientific director of Ludwig Institute for Cancer Research.

In 2004, the same year that Kang came to Princeton, MTDH was first identified as a gene involved in metastatic mouse breast tumors. The gene received little attention until Kang’s blockbuster 2009 paper, which showed that MTDH was amplified — meaning it produced MTDH proteins at abnormally high levels compared to normal cells — in 30% to 40% of tumor samples from breast cancer patients, and it drives metastasis and chemoresistance in those tumors.

That discovery drew media attention from around the world.

“His team’s research continued, and their next set of breakthroughs, published in a series of papers in 2014, showed that MTDH is vital for cancer to flourish and metastasize. Mice without the gene grew normally, showing that it isn’t essential for normal life. And critically, if those mice did get breast cancer, they had significantly fewer tumors, and those tumors didn’t metastasize.”

Kang’s team soon found that the same was true for prostate cancer and then lung and colorectal cancer. Other teams confirmed similar results for liver cancer and many other cancers.

“So basically, in most major human cancers, this gene is essential for can-
cer progression and all the terrible things associated with cancer, and yet it doesn’t seem to be important for normal devel-
oment,” said Kang. “Mice can grow and breed and live normally without this gene, so we knew this would be a great drug target.”

Around the same time, the crystal structure of MTDH revealed that the protein has two finger-like projections that nestle into two pockets on the surface of another protein, SND1, “like two fingers sticking into the holes of a bowling ball,” Kang said. Their experiments showed how intimately MTDH and SND1 depend on each other.

That gave the researchers an idea for how to tackle MTDH, which they hadn’t been able to disable head-on: if they could disrupt this connection to SND1 that would neutralize MTDH’s dangerous effects. They pored through the molecules in the Small Molecule Screening Center, a library of compounds housed in Princeton’s Department of Chemistry, until they found a molecule that can fill one of the two deep pockets — those bowling-ball holes — thus preventing the proteins from interlocking.

“We knew from the crystal structure what the shape of the keyhole was, so we kept looking until we found the key,” said Kang. Kang makes it sound simple, but finding the right compound was incredibly challenging, said Shen. “The screening took two years without any progress, until one day we saw a significant shift in our high-throughput screening assay platform.”

At that moment we knew the compound does exist, and we found it!”

More than a decade after confirming that MTDH would be a good target, they’d finally found the silver bullet.

Because while it’s important to show that mice born without MTDH are resistant to cancer, that doesn’t help patients, whose genes can’t be rewritten.

“In 2014, we showed what happens if you knock out a gene at birth,” Kang said. “This time, we show that after the tumor has fully developed, we can eliminate the function of this gene. We found that whether it is genetically or pharmacologically using our compound, you achieve the same outcome.”

Kang and his team are working to optimize the compound to achieve higher affinity and a lower effective drug dose. “I hope we’ll be ready for clinical trials in human patients in two to three years,” he said. “In terms of the biology, I think we are only starting to scratch the surface. I foresee another decade of discovery work, so, the saga continues.”

Liz Fuller-Wright, Office of Communications

University, town pitch in together to help underserved

M embers of the University community and the larger Princeton community opened their pan-
tries and their hearts to help underserved residents during the holiday season from Thanksgiving to New Year’s Day.

Through the Grateful Greetings program, 282 greeting cards signed by University employees were mailed through the non-
profit organization Operation Gratitude to military stationed abroad.

The Holiday Outreach Initiative is sponsored by the Office of Community and Regional Affairs, the Office of the Dean of the Undergraduate Students, the Department of Athletics, the Graduate School, the Office of Communications, Conference and Event Services, the Arts Council of Princeton, the Municipality of Princeton and YWCA Princeton.

Volunteers and runners gathered by the Employees Resource Group (ERG) refreshment and gifts table at the 14th annual Tiger Trot. Nearly 300 Princeton University students, faculty, staff and friends took part in the 5K race to raise funds and collect food donations for those in need in Mercer County. A total of 296 people wound their way through campus on Nov. 15, the Friday before Thanksgiving. Another 29 people participated remotely by completing a 5K course near home or elsewhere. The runners and walkers raised $3,700 and a significant amount of canned goods and other packaged food for Arm in Arm, a non-profit organization that helps families struggling financially. Arm in Arm was founded in Princeton as The Crisis Ministry of Mercer County in 1980 and changed its name in 2016. Photo courtesy of Campus Recreation

Organized by the University’s Office of Community and Regional Affairs, the Holiday Outreach Initiative collected greeting cards for U.S. military overseas, yarn to be knitted into items to keep the disabled and others warm, and cans of food to help the hungry.

The annual campus-wide food drive to support the Mercer Street Friends Food Bank expanded this year to include off-campus donation stations at the Municipality of Princeton’s Monument Hall and Witherspoon Hall, the Arts Council of Princeton, and the YWCA Princeton.

The drive raised nearly a ton of food — 1,960 pounds, to be exact — that the food bank distributed among the more than 50 pantries, shelters and soup kitches it supports.

The campus and off-campus donation sites also accepted donations of yarn for the Community Threads program initiated by the Student Life team at the Graduate School. They donate the yarn to the “Knit Wits,” a group of knitters at the Princeton Senior Resource Center who create and donate lap blankets for disabled veterans and critically ill children, infant caps for newborns, and scarves for home-

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Mingsheng Shen, Photo by Flynn Larsen for Ludwig Cancer Research

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Princeton publishes its inaugural annual report on diversity, equity and inclusion plans and progress

A part of the University-wide effort to combat systemic racism, Princeton University has published its first annual report highlighting diversity, equity and inclusion work across campus. The report provides a snapshot of projects, programs and staff initiatives from throughout the past year, and also includes demographic and climate data about students, staff, faculty, and postdoctoral scholars.

Shirley Satterfield, local historian, presents Wintersession lecture on the African American experience in Princeton

S hirley Satterfield, founder and president of the Witherspoon-Jackson Historical and Cultural Society, gave a guest lecture on African American life in Princeton during the University’s new Wintersession program before the start of the spring semester. Satterfield, whose family has lived in Princeton since the 1870s and who grew up in the Witherspoon-Jackson neighborhood, spoke to students, faculty, staff and alumni about race and progress in Princeton.

“We are all connected,” Satterfield said. “We need to recognize that we are a microcosm of the rest of this country. We need to understand the problems of our own community.”

Satterfield discussed the “Princeton Plan” that she discussed at the Witherspoon School for Colored Children on Quarry Street, with Princeton Plan integration, she attended the Nassau Street Elementary School. She worked as a guidance and college counselor with Princeton High School from 1915-2020, where she started several projects for the advancement of students from underserved communities.

The Witherspoon-Jackson Historical and Cultural Society has a mission to connect, research, protect and tell the rich history of African American life and contributions in Princeton.

Climate, inclusion and equity:

- The Office of the Dean for Research launched new initiatives to expand leadership and participation of groups historically underrepresented in research, innovation and entrepreneurship. The office’s September 2021 Empower Conference focused on celebrating Black entrepreneurs from throughout academia.
- A new endowed professorship of Indigenous studies was established, and a search for the position is under way.
- The Faculty Advisory Committee on Diversity was reconvened.
- The University reaffirmed its aspirations to increase the number of underrepresented tenured and tenure-track faculty members by 50% within five years.
- The third cohort of Presidential Postdoctoral Research Fellows was welcomed to Princeton. The program recognizes and supports scholars who can contribute to the University’s diversity, broadly defined, including members of groups who have been historically or presently underrepresented in the academy or particular disciplines.

Future reports will provide similar annual updates on the underlying work that moving toward greater diversity, equity and inclusion requires sustained, multi-generation commitment.

Our investments in racial equity are a theme of the [2020-21] report, but the report also provides highlights of other new and ongoing campus initiatives,” Eisgruber said. “These activities represent a step forward, not an end. Our continuing commitment to being an excellent and diverse institution in which every member thrives will require sustained effort. We will hold ourselves accountable over time and report … both our successes as well as our challenges.”

To read the full report online or download the PDF, please visit the Office of Institutional Equity and Diversity site at inclusive.princeton.edu. Updates about ongoing efforts to combat systemic racism are also available on the Racial Equity website at racialequity.princeton.edu. A few highlights from the 2020-21 report’s three topic areas are below; please note the report for the full scope of diversity, equity and inclusion updates.

Academic experience examples:

- A new general education distribution requirement in the area of culture and difference was established for undergraduates.

University to celebrate Commencement 2020 and 2022, Reunions this May

Pomp and circumstance will return to Princeton Stadium in May as the University celebrates Commencement not only for the Class of 2022, but also honors the Class of 2020 which had its ceremony canceled due to the pandemic in 2020. Students from both classes will be celebrated during a single Commencement ceremony on May 26-27.

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Six days later, on Tuesday, May 24, the University will hold its 275th Commencement. The ceremony is for graduating students in the undergraduate Class of 2022 and their guests, as well as graduate alumni who received a final degree in the 2021-2022 academic year and their guests.

In the three days before the Commencement, the University plans to celebrate in-person Reunions for alumni. COVID safety measures are an important aspect of the event. The Office of Inclusion and Engagement is working with University health officials and campus partners to follow University, state and national public health advisories.

Shirley Satterfield, local historian, presents Wintersession lecture on the African American experience in Princeton

This was the second year of the University-wide Wintersession. Wintersession is a two-week experience for Princeton University students, faculty and staff to experiment and explore through nontraditional learning opportunities. Wintersession presenters offer seminars, workshops and events featuring a variety of skills and perspectives.

Shirley Satterfield, local historian, presents Wintersession lecture on the African American experience in Princeton

Some of Shirley Satterfield’s memorabilia. Photo courtesy of Shirley Satterfield from a video about her family produced for the Witherspoon Presbyterian Church.