

From 'Mass Aggie' roots to global reach



A view of the University of Massachusetts Amherst campus this month. (BRIDGET PEERY / THE REPUBLICAN)

UMass Amherst cements status as international player among top research universities

By **CAROLYN ROBBINS**
Special to The Republican

AMHERST — From its humble 19th century roots as a land-grant agricultural college, the commonwealth's flagship university has built an international reputation as one of the nation's top-notch research institutions.

FIELD TRIP



When the Massachusetts Agricultural College — the forerunner of UMass Amherst — opened in 1867 with William Smith Clark at the helm, the future of the fledgling institution was uncertain.

But Clark — a Williston Academy graduate, Civil War veteran and Amherst College professor — took up the challenge with a vision that the school could become much more than a training ground for farmers.

In 1867, Clark traveled to Japan to help the government open a new agricultural college modeled after the school in Amherst. With that decision, he set a course for "Mass Aggie" to become a future academic powerhouse — one that would attract students and scholars from across the globe.

The Sapporo Agricultural College — now Hokkaido University — opened its doors less than a year after Clark arrived in Japan. Clark remained at the school for nearly a year, serving as an administrator, teacher and a technical adviser to the island of Hokkaido.

Now, more than a century after Clark returned to Amherst, the bond between the two universities remains strong, according to Kalpen Trivedi, vice provost for global affairs in the International Programs Office.

"The way we form connections and collaborations with universities abroad is by "drilling down to find points of engagement," Trivedi said, adding that UMass is committed to exploring new global partnerships while keeping existing connections.

Collaboration expands

Last April, Hokkaido University President Kiyohiro Houkin and his delegation visited the Amherst campus to explore opportunities and future partnerships between the faculties, including the exchange of students and academic research collaborations.

Laura Vanderberg, acting vice chancellor for the Office of Research and Engagement, who works closely with Trivedi, said the collaboration with Hokkaido University has historically centered around their shared interest in agricultural sciences.

But the universities recently held a joint symposium focused on polymer science and engineering — a relatively new area of collaboration.

Today, the university enrolls nearly 4,200 international students — 1,800 undergraduate and 2,400 graduate students — propelling research collaborations between UMass and universities sending students to the U.S.

Last year, for example, UMass "did a deep dive" into points of engagement with the University College of Dublin, which sends many students to UMass.

This year, the two universities announced "Seed Funding for Academic



Tymofiy Mylovanov, president of the Kyiv School of Economics, speaks on a "University in Wartime" at the Isenberg School of Management Feb. 12 as part of the school's global outreach program. (PHOTO BY STEVE SMITH)

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Research Initiative," Trivedi said. The program aims to fund "novel research in multidisciplinary disciplines including STEM, agriculture, animal sciences, health, social sciences, business and arts and humanities," according to the call for applications.

Vanderberg said the university is working to create a micro grants program to support faculty travel to a small number of international partners. "In the fall, we offered micro grants to faculty members that will travel to universities in the German state of Baden Wurttemberg," she said.

Last year, the office funded UMass researchers from biology, food science, microbiology, mechanical and industrial engineering, resource economics, electrical and computer engineering, and earth, geographic and climate sciences to pursue research collaborations.

Biggest funders

Vanderberg's office, which is responsible for the university's entire research enterprise, works closely with faculty members pursuing grants. "We put out several thousand applications a year for research funding worth billions of dollars," she said.

The National Institute for Health, the Department of Defense as well as the National Science Foundation and the Commonwealth of Massachusetts are the largest funders of research on the campus, she said.

"A large portion of our portfolio is with the NIH focusing on improving people's health with the aim of developing therapies for chronic diseases," she said. "We have a lot of researchers working on projects that involve what is called 'big data.'"

In some cases, researchers are using genomic datasets to understand how certain genetic backgrounds might contribute to disease risks, she said.

"In other cases, those big datasets are useful for studying how environmental factors related to pollution exposures might contribute to economic factors, or health factors, or climate factors," she said.

There is also a need to use high performance computing to run simulations with large datasets in the fields of astronomy, or cybersecurity, or economics," Vanderberg

said. "These examples are just the tip of the iceberg of the kinds of cutting edge work going on at UMass Amherst."

UMass has seen an upward measurement in grants and awards for research projects, reaching \$240 million in fiscal year 2023.

Range of research

In addition to her role at the research and engagement office, Vanderberg is a professor in the Department of Environmental Health Sciences in the School of Public Health and Health Sciences.

Her laboratory research examines the effects of endocrine-disrupting chemicals that mimic or block the actions of hormones on the function and disease of the mammary gland.

One scientific puzzle her research is working on solving is why, in some cases, women are unable to breast-feed their babies. Could certain "forever chemicals" such as BPA be the culprit?

"It's soup to nuts," Vanderberg said of the academic disciplines represented in faculty applications seeking funding.

They include biomedical technology, engineering history, law and politics and public welfare.

Of the thousands of grant applications submitted, about 1,500 will receive funding, she said.

In 2024, Trivedi expects UMass Amherst's global reach will continue to grow as new and existing partnerships form innovative connections to solve world problems, from climate change, to cures for chronic diseases, to social problems.

UMass is partnering with INTO, an education and recruitment partner, connecting international students with top universities in the U.S., U.K. and Australia.

Building on reputation

Olivia Streatfield, CEO of INTO, said the organization is proud to count UMass among its partners, calling it an elite institution globally for its commitment to academic excellence and pursuit of progress.

"This partnership will build on the university's reputation for world-class academics and innovative research, ensuring more students benefit from the educational and professional opportunities available at UMass," Streatfield said.

The partnership will support international student recruitment for 17 UMass master's degrees in highly sought fields such as business, science and engineering, she said.

'In Ukraine, we worry about everything': Exchange students find peace, friendship at UMass

By **CAROLYN ROBBINS**
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AMHERST — Ukrainian exchange students studying at the University of Massachusetts Amherst know what it's like to be in the middle of an exam when rockets start flying.

Economics major Iryna Horobet, one of four exchange students from the Kyiv School of Economics, was sitting down to take an exam last February when an air raid siren sounded.

"We had to go to the shelter and finish our exam," she said. "It was very scary."

FIELD TRIP



And the previous three months, preparing for exams, had also been "extremely stressful."

"It's very dark at that time of year and our homes were often without electricity," she said. "We had no lights or internet — sometimes for as long as eight hours."

Horobet spoke during a videotaped panel discussion held last fall at the Isenberg School of Management at UMass.

All of the students said they are grateful for the opportunity to study at UMass. "We feel safe here," she said.

"There is no student life in Ukraine, like there is here," another panelist said. "In Ukraine we worry about everything. Here, Americans are happy and open."

Another student panelist said American students study, but "they are very happy, which is nice. I hope they appreciate it."

Learning amid war

The Ukrainian students, all economics majors, are spending a semester at UMass under an agreement last March with the Isenberg School to assist students and schools impacted by the ongoing war in Ukraine.

The UMass-Kyiv School of Economics initiative was spearheaded by Anna Nagurney, Eugene M. Isenberg chair of Integrative Studies, along with a team of professors in economics, legal studies and political science.

On Feb. 12, KSE President Tymofiy Mylovanov visited UMass to meet with students and faculty and deliver a lecture about the challenges of running a university program in wartime.

During his remarks, Mylovanov said the invasion by Russian forces on Feb. 24, 2022, posed an enormous

"The exchange students love the UMass dining hall food and meeting students from Massachusetts and other states."

Anna Nagurney, Eugene M. Isenberg chair of Integrative Studies, UMass Amherst

challenge for the university.

To ensure the safety of its students, the school built a bomb shelter so faculty could continue teaching in the midst of air raid sirens and alerts.

Amazingly, the number of students has grown 3.5 times since the invasion and the school continues to expand its programs due to increasing demand, Mylovanov said.

Nagurney called Mylovanov's visit a "truly special day" for the university. "This partnership continues to generate research publications, conference presentations and friendships across the miles," she said.

"The exchange students love the UMass dining hall food and meeting students from Massachusetts and other states," Nagurney said.

The visiting students are also making friendships with international students from countries such as India, Vietnam, Turkey, Japan and many others — an experience they would not have in Ukraine.

Nagurney said she has never been more proud to be a faculty member at UMass. "Through this partnership we have gone where no one has before and it is so appreciated by all those involved."

Kalpen Trivedi, vice provost of global affairs and director of the International Programs office, said UMass is proud to do its part while Ukraine is being illegally invaded.

"This partnership is the most productive relationship we have had in the shortest periods of time," he said. The partnership, he said, is a way to keep Ukrainian academia alive.

Ukrainian students said they miss their homeland and hope to return to aid in the recovery and reconstruction of their country.

In the meantime, UMass is doing its part to stem a potential brain drain in Ukraine by supporting the Kyiv school and its faculty.