

To the Board:

As UMass Boston gears up for the start of the new academic year, I am pleased to present this quarterly report highlighting recent progress we have made in enacting our mission. Of particular interest in this report are stories that underscore the importance of community collaboration in higher education today. Partnerships between UMass Boston, community organizations, businesses, and government generate opportunities that enable our Beacons to receive an education that meets the needs of the 21st century workplace. Indeed, UMass Boston’s deep community engagement enriches our teaching, research, and scholarship, and prepares students for lives of consequence.

- UMass Boston received \$1.6 million from the Massachusetts Life Sciences Center to develop a new Biophysical Instrumentation Core (BIC) Facility and bring cutting-edge instrumentation, methodologies, and expertise to our research enterprise. The facility will enable researchers on and off campus to deepen life sciences inquiries, from basic understanding of biological processes to examining protein-drug interactions.
- Together with the Massachusetts Office of Coastal Zone Management and the National Sea Grant Program, our Urban Harbors Institute hosted this year’s National Working Waterfront Network conference in July. The event brought together scholars, practitioners, and community advocates to explore strategies for shaping working waterfronts that serve the economic, recreational, and cultural interests of all stakeholders, sustainably and equitably.
- UMass Boston’s Mauricio Gastón Institute for Latino Community Development and Public Policy was one of 140 local nonprofits to receive grants from the Cummings Foundation. The Institute will receive \$100,000 over two years to help fund the establishment of the Youth Wellness Corps Fellows program, an initiative that will offer underrepresented UMass Boston undergraduates interested in health careers internships in organizations and health centers focused on health equity in communities of color ravaged by COVID-19.

I am pleased that UMass Boston continues to build on our distinctive strengths: our devotion to student-centered learning and success; our dedication to advancing knowledge collaboratively; and our keen commitment to impactful education and research.

I trust you will appreciate this report on our progress.

– Chancellor Marcelo Suárez-Orozco



PhD students Patricio Belloy, Jessica Lillquist, Kelsey Edmond, and Margaret Gatonye visit the Port of Esbjerg.

UMass Boston Delegation Travels to Denmark to Explore Shift to Clean Energy

The Alliance for Business Leadership and UMass Boston partnered with the Barr Foundation this summer, assembling a delegation to Denmark to explore the country’s green transition and world-leading offshore wind industry.

The diverse delegation represented various sectors of the Massachusetts economy including health-care, finance, and development, was designed to bring together business and academic leaders to view what is possible for Massachusetts, and focus on how Massachusetts can accelerate a shift to clean energy.

School for the Environment Interim Dean Bob Chen, Professor of Public Policy and Public Affairs Michael Johnson, Assistant Professor of Public Policy and Public Affairs Amit Patel, and four UMass Boston PhD candidates—Jessica Lillquist, Kelsey Edmond, Patricio Belloy, and Margaret Gatonye—participated in the trip to Denmark.

“They served as key partners in preparation for the

(continued on pg. 3)

Position University in the Higher Education Marketplace



Alex Amalfi signed with the Toronto Blue Jays in July.

UMass Boston Baseball Standout Inks Professional Contract with Toronto Blue Jays

Junior Alex Amalfi has become the third player in UMass Boston baseball history to sign a deal with a Major League Baseball organization. Amalfi, who was an undrafted free agent, signed with the Toronto Blue Jays in July.

Amalfi, who was a red-shirt junior for the Beacons in 2022, was rated as one of the top righty's in New England all season long. As the Beacons ace, the Ashland native posted an ERA of 3.38, while finishing out the campaign with a 1.39 WHIP.

"I am so happy for Alex to have the chance to live his dream of playing professional baseball. He has worked his tail off while being a Beacon and really developed into an elite pitcher. To go from having very few options out of high school to a professional contract in a few years is a testament to his work ethic and how coachable he has been. I am super excited for him and can't wait to see him realize his dream," said UMass Boston baseball coach Brendan Eygabroat.

Amalfi is now the second player under coach Eygabroat, and third in program history to pen a professional contract. Former outfielder Jamill Moquete was picked in the 32nd round of the 2014 MLB June Amateur Draft by the Baltimore Orioles, while in 1990 Steve Coffey was selected by the Chicago Cubs in the 20th round.

Chancellor Pens Op-Ed on Education in *The Hill*

Chancellor Marcelo M. Suárez-Orozco authored an op-ed for *The Hill*, "Under threat, education requires global action." He wrote that the challenges facing global education cannot be denied and will require solutions of scale, coordination, and commitment. He also pointed to UMass Boston's Center for Evidence Based Mentoring, which is developing new tools that enable mentors to better support mentees with scientifically proven education and health-and-wellness apps.

"Tired old claims, silver bullets, and magical thinking will no longer do. Nor will averting our gaze to growing inequities. We must begin to educate the whole child for the whole world," he wrote.

The op-ed shares findings from the chancellor's new volume *Education: A Global Compact for a Time of Crisis* with original essays he commissioned by scholars from around the world, including Stefania Giannini, the director of education for UNESCO; development economist Jeffrey Sachs; cognitive psychologist Howard Gardner; Carla Rinaldi, president of the Reggio Children Foundation; and other academics from leading global universities.



Scan QR code for op-ed.

UMass Boston Field School Named an Historic Game Changer by *Connecticut Explored*

Connecticut Explored, a nonprofit history magazine, has named the Eastern Pequot Archaeological Field School, run by the Eastern Pequot Tribal Nation and UMass Boston's anthropology department, as one of 20 Game Changers, modern-day historians whose methods and subjects go where traditional historians have not gone before.

Each Game Changer—people, organizations, projects, a book—will be highlighted in free public programs in the coming months. Each will get a feature in the magazine. A gala in October will celebrate their contributions to local lore.

At the field school, in North Stonington, Connecticut, studies by community members, professors, and students have documented thousands of years of Eastern Pequot history. The philosophy of the project, as opposed to previous historical studies, is respect for the culture and sovereignty of the tribe.

Position University in the Higher Education Marketplace (cont.)

Chief Data Officer Magazine names PhD Student a Leading Data Consultant of North America

Information systems for data science and management PhD student Don Jenkins was recently named a Leading Data Consultant of North America by *Chief Data Officer Magazine*. Jenkins has been pursuing his degree since 2017 while working full-time, and started his consultancy, Data-Driven Decision Advisors, in 2019.

Today, Jenkins works as the chief operation officer for Mirah, a company transforming behavioral health through measurement-based care. He has co-authored a paper on a sustainable energy-purchasing decision model with Professor of Management Information Systems Jeff Keisler, and a second paper on climate change flood mitigation co-authored with several of his committee members has been submitted to the *Production and Operations Management Journal*. He plans to defend his dissertation this fall.

"The PhD program at the College of Management was perfect for me. The faculty and committee have supported my journey, helping me every step. . . I'm not sure I would have had an opportunity like this at any other school," Jenkins said.

Improve Delivery of Administration and IT Services

New Vice Chancellor Appointed to Lead Student Affairs

Karen Ferrer-Muñiz, PhD, has been appointed as UMass Boston's new vice chancellor for student affairs. The appointment took effect on July 25. Vice Chancellor Ferrer-Muñiz brings to UMass Boston a depth of experience in student affairs, retention, and engagement, along with a strong commitment to equity, diversity, inclusion, and community engagement.



Vice Chancellor for Student Affairs Karen Ferrer-Muñiz

"I am confident she will be a champion for all our students," Chancellor Marcelo Suárez-Orozco said.

Vice Chancellor Ferrer-Muñiz has more than 25 years of experience as an educational administrator specializing in student development. She previously served as vice president of student affairs and dean of students at Utica University in New York. Prior to joining Utica, she served as dean of retention and instructional support services at the SUNY system's Hudson Valley Community College in Troy, New York.

In her first weeks on campus, Vice Chancellor Ferrer-Muñiz met with students and staff to continue elevating a student-centered focus on serving the university's diverse student community with compassion, excellence, and equity—in complete alignment with the forthcoming university strategic plan.

Cover story (cont.)



Middelgrunden Offshore Wind Farm

trip, providing valuable background on all that we would see, and they contributed a wealth of knowledge during the trip, provoking meaningful conversation about policy and action," said Jen Benson, president of the Alliance for Business Leadership. "ABL is grateful for this new partnership and looks forward to our continued collaboration with UMass Boston on all things energy, climate, and beyond."

The 31-person delegation took a three-hour sustainability and diversity focused bike tour of Copenhagen; toured the Port of Esbjerg; visited CopenHill, the cleanest waste-to-energy plant in the world; and took a boat out to the world-famous Middelgrunden Offshore Wind Farm. They learned about much more than public policy, funding, and Denmark's projected net-zero timeline. They repeatedly heard and saw that the Danish economy and workforce has not only survived, but thrived, under the country's ambitious policy.

Increase Endowment



Alumni and friends gathered in Portsmouth, New Hampshire, on July 21 for one of UMass Boston Alumni Engagement's annual receptions.

UMass Boston Engages with Alumni Community

Edith Carol Stein Honors Late Political Science Professor

A generous donor recently made a gift to honor a beloved late faculty member. Earlier this year, Edith Carol Stein committed \$25,000 to support the Rusty Simonds Scholarship Fund. The fund was established in honor of the late Arthur P. "Rusty" Simonds, an expert in political theory and a member of the Political Science Department at UMass Boston for over 30 years. The scholarship is given annually to an outstanding UMass Boston junior or senior who demonstrates an interest in political theory and who intends to pursue an advanced degree.

Niki Janus Establishes Scholarship Endowment Fund

Donor Niki Janus recently made a transformative gift to support UMass Boston students for years to come. With the assistance of her stepdaughter, alumna Michelle Davis '80, Janus established the Niki Janus Endowed Scholarship Fund at UMass Boston with a gift of \$200,000 — an amount that is eligible for a 50-percent state match through the Public Higher Education Endowment Incentive Program, commonly known as the Endowment Match Program. It is with this endowed scholarship that Janus hopes to provide students with the opportunity to pursue their studies with confidence.

University Advancement Announces Year-End Breakthrough for FY22

UMass Boston secured \$40.6 million in new gifts and pledges in FY22, and \$26.1 million was designated to our endowment. Our momentum was propelled by Rob and Donna Manning's extraordinary gift of \$15 million, which, coupled with the state Endowment Match Program, inspired an unprecedented number of major gifts to the university. These gifts included the second-largest commitment in UMass Boston's history; an anonymous \$6 million outright gift for the endowment; and the establishment of 38 other new endowments, another high-water mark for UMass Boston.

Alumnus Establishes Scholarship to Honor UMass Boston Professor, Mentor

After graduating with his bachelor's degree in philosophy, alumnus Mikel Moyer '19 set out to honor the professor who helped him throughout his journey at UMass Boston. Moyer established the Dr. Nelson P. Lande Endowed Student Support Fund, which will provide one or more annual awards to a part- or full-time undergraduate student who has outstanding financial need. As a retiree with college-aged children, Moyer acknowledged his unique and privileged position of being able to focus on his coursework without external pressures. He hopes this scholarship will alleviate stressors for future students.

Enhance the Learning Experience



Undergraduates working as research assistants at the Center for Social and Demographic Research on Aging, (from left) Daniel Caron, Himani Pachchigar, Sabrin Zahid, Bendu David, and Roisin O'Keeffe.

CSDRA Interns Gain Research, Social Policy Experience as Undergraduates

They are in their early 20s and entering their junior years at UMass Boston, with their whole careers waiting ahead of them. Yet in their work at UMass Boston's Center for Social and Demographic Research on Aging (CSDRA), five undergraduate research assistants have found themselves considering the lives of people on the other end of the adulthood spectrum.

CSDRA's work with Massachusetts communities has mushroomed in recent years as more towns and cities turn to the center to help them assess the needs of their older residents and to recommend the best way to meet those needs. Working under the guidance of CSDRA Director Caitlin Coyle and senior doctoral students, the undergraduates contribute to all aspects of the center's work, including coding survey results from older residents, taking notes in focus groups and community forums, and analyzing qualitative survey responses. Coyle and her doctoral student team encourage the undergraduates to think of ways to use their experiences to develop their own research questions.

"I've definitely learned a lot about aging communities and their needs, which is something I've never thought about before," says Sabrin Zahid, who has interned at CSDRA for almost a year. "Before working here, the only interaction I'd had with older people was with my grandparents. Now I'm learning about older people's housing needs and about how many of them want to downsize but how hard it is to do."

Their CSDRA work also is opening the students' eyes to the field of gerontology and to the possibilities of pursuing social policy and applied research in their future schooling and careers.

Mauricio Gastón Institute Awarded \$100K Cummings Grant

UMass Boston's Mauricio Gastón Institute for Latino Community Development and Public Policy is one of 140 local nonprofits to receive grants through Cummings Foundation's \$25 Million Grant Program. The Gastón Institute was chosen from a total of 580 applicants during a competitive review process. It will receive \$100,000 over two years.

Funds will help to establish the Youth Wellness Corps Fellows (YWCF) program, which will provide underrepresented UMass Boston undergraduates interested in health careers with internships in community organizations and health centers focused on health equity in communities of color ravaged by COVID-19.

"We are delighted to be able to launch this health equity internship program for our students," said Professor of Biology Adán Colón-Carmona, who is leading the project. "We also look forward to directly connecting their educational experiences with community-based organizations doing valuable frontline health equity work that is having a positive impact in neighborhoods many of our students call home."

As Boston neighborhoods have been devastated by impacts from the pandemic, this health careers training program will place students in their communities, allowing them to address issues of health equity while gaining skills to contribute to Greater Boston's STEM-related workforce needs.

Enhance the Learning Experience (cont.)



HeatherJean MacNeil pictured with committee member Maura McAdam.

PHD Grad Receives Best Paper at the Diana International Research Conference

HeatherJean MacNeil, PhD '22, received the best paper award at the Diana International Research Conference this summer. Her paper titled, "Inclusion or Exclusion? An Intersectional Analysis of the Massachusetts Cannabis Industry," was the primary topic for MacNeil's dissertation and applied intersectionality to the emerging cannabis industry.

The Diana International Research Conference took place in Dublin, Ireland, bringing together more than 100 scholars worldwide and providing a forum to share global research on gender and women's entrepreneurship. MacNeil graduated in May with her PhD in organizations and social change.

"This was quite the honor. The Diana International Research Conference convenes scholars from around the world that focus their research on gender and entrepreneurship, so to be recognized among this specific group was quite amazing," MacNeil said. "Many of the researchers that I cited in my dissertation and that have inspired my research approach were present at the conference and among the other presenters."

UMass Boston Launches Policy Across Disciplines Program

The McCormack Graduate School for Policy and Global Studies and the College of Liberal Arts have kicked off their Policy across Disciplines Program, which includes a speaker series and a collaborative grants award program.

The program will leverage the McCormack Graduate School's distinctive educational brand of advanced policy and public service studies programs in collaboration with UMass Boston's largest college, the College of Liberal Arts, and its diverse, cross-disciplinary, liberal studies programs.

The two-college collaboration will support faculty research and scholarship as well as student success in liberal arts and policy studies at UMass Boston. The speaker series will host scholars and practitioners—in both individual talks and panel discussions—from cross-disciplinary backgrounds and disciplines. The series will address a range of topics that have implications for some of the most pressing policy issues of our times, such as vaccine and mask mandates, insurrectionism vs. terrorism, banning critical race theory, withdrawing from Afghanistan, and rolling back Roe vs. Wade.

The grants award will offer two \$5,000 seed grants to two collaborative, cross-college research faculty teams from McCormack and CLA, who propose to conduct innovative, applied, interdisciplinary policy research and apply to prestigious external award competitions.

Develop First-Rate Infrastructure



Crews move materials into the quad.

Quad Project Moves into Next Phase

Construction crews began hauling crushed material into the Quad last month, as part of the next step in the Substructure, Science Center, Pool Building and Plaza Demolition and Quadrangle Development (SDQD) project. Crews are reusing the crushed material from the Science Center demolition to raise the Quad from 24' elevation at the Clark Athletic Center to 49' elevation at the plaza.

Develop a Leadership Role in Public Service



NWWN conference attendees toured Boston's working waterfronts on the Columbia Point.

Urban Harbors Institute Hosts Conference to Address Issues Facing Nation's Working Waterfronts

This year's National Working Waterfront Network (NWWN) Conference was held at UMass Boston in partnership with the university's Urban Harbors Institute. The NWWN is dedicated to supporting, preserving, and enhancing the nation's working waterfronts. This unique conference, co-hosted by the Massachusetts Office of Coastal Zone Management and Maine Sea Grant, connected stakeholders from across the U.S. to showcase and initiate successful timely solutions that address working waterfront and waterway issues.

The weeklong conference featured keynote speakers Lieutenant Governor of Massachusetts Karyn Polito and U.S. Representative Chellie Pingree from Maine. UMass Boston faculty and staff, including Founding Director of the Stone Living Lab Paul Kirshen, Kristin Uiterwyk and Kimberly Starbuck from the Urban Harbors Institute, Professor of Environmental Law and Policy John Duff, Environmental Sciences PhD graduate Courtney Humphries, and graduate research assistant Rachel Bratton, presented their research and work throughout the week.

Panelists and presenters spoke on a variety of topics including coastal resilience, shoreside infrastructure, offshore wind energy, and climate adaptation projects from across the country.

Urban Harbors Institute Director Kristin Uiterwyk said the conference is especially timely given the significant issues and opportunities facing working waterfronts and their workforce. Uiterwyk said some of those critical issues include the need to develop and diversify the workforce for industries such as offshore wind and fishing, improving climate resiliency, making industries sustainable, and addressing the need to manage conflicting uses along waterfronts, such as early morning fishing activity and luxury condos and hotels.

McCormack Grad School Partners with WUMB Radio to Host New Public Affairs Show

The John W. McCormack School of Policy and Global Studies has partnered with WUMB Radio to host McCormack Speaks @ WUMB Radio, a series of conversations with McCormack Dean Rita 'Kiki' Edozie and distinguished guests on a range of topics including town management, public health and COVID-19, U.S.-Africa relations, Critical Race Theory, democracy and freedom in Ukraine and Russia, public service and policy careers, and other timely public affairs topics.

The McCormack Speaks @ WUMB Radio series, broadcasting every Sunday morning at 7:30 a.m. at 91.9 FM, commenced on June 12. The first episode of the series featured a conversation with Massachusetts Representative Jon Santiago, who spoke on pathways to careers in public service, recounting his own experiences and ventures into state and representational politics.

McCormack and WUMB hope to continue programming this fall with a series of policy conversations featuring local leaders from the Greater Boston community.

"There are a lot of public officials in the community who would like that kind of platform. There's a lot of public media out there that already does this, but maybe not enough. We're going to put together a full program featuring public officials in the Greater Boston community and see how that runs," Edozie said.

Develop a Leadership Role in Public Service (cont.)



Reyes Coll-Tellechea is chairwoman of the Boston Human Rights Commission.

Mayor Wu Appoints UMass Boston Professor as Chair of Boston Human Rights Commission

Boston Mayor Michelle Wu has named Professor of Latin American and Iberian Studies Reyes Coll-Tellechea as chairwoman of the Boston Human Rights Commission (BHRC). Coll-Tellechea was first appointed to the commission in 2020, when it was reactivated by former Mayor Martin Walsh.

“We are at a treacherous political crossroad in our nation. The rise of hate is palpable. History shows that civic organizations such as the BHRC can play an important role as advocates, protectors, and representatives of those who are the targets of hate,” Coll-Tellechea said.

The commission conducts research on policies, practices, systems, or issues where discrimination, hate, racism, or bigotry may be a factor in the differential treatment of specific groups of people in the City of Boston. They also assist individuals in finding the appropriate resources to address their discrimination complaints, and educate the public and policy makers on issues, needs, and perspectives related to confronting discrimination, racism, hate, and bigotry in Boston.

The author and editor of several books, Coll-Tellechea conducts research on the experience of marginalization, exclusion, and discrimination as represented in literature, as well as on some of the strategies used by the powerful to exclude others from their privileges. She has previously served on Mayor Walsh’s Transition Task Force (Human Services) and the City of Boston’s Diversity Task Force.

Continue a Positive Focus on Diversity and Positive Climate



Over 230 students and 30 faculty and staff were inaugurated into Tri-Alpha.

University Launches New Honor Society for First Generation Students

The First Forward Taskforce is continuing to enhance support for first-generation students, faculty, and staff by launching a nationally recognized first-gen honor society known as Alpha Alpha Alpha (Tri-Alpha). The Tri-Alpha chapter promotes academic excellence and provides opportunities for growth, leadership development, and community service for first-generation college students.

The first induction ceremony was held on May 4 and focused on mentorship between students and faculty, as well as peer-to-peer mentorship. Over 230 students—a mix of graduates and undergraduates—and 30 faculty and staff were inaugurated.

UMass Boston Offers a Regional Social Justice Case Study Competition

UMass Boston’s first Social Justice Case Study Competition successfully concluded this May. Sponsored by the Chancellor’s Office, Provost’s Office, and the Division of Student Affairs, the competition sought to give students, staff, and faculty at UMass Boston and in the Greater Boston area an opportunity to build new knowledge around the challenges people of historically marginalized identities experience as they move through higher education.

The competition aimed to ignite collaborative problem solving for issues related to bias, discrimination, diversity, equity, and inclusivity as it relates to the college experience. Winning case studies included “Asians: Revealing the Complexities of Inclusion in Campus Communities,” and “Changing the Paradigm of Minority Inclusion, Equity, and Diversity Within Higher Education.”

Maintain and Improve Affordability and Access



Students and faculty meet at Madison Park Technical Vocational High School.

Roxbury High School Students Study Urban Planning at UMass Boston

UMass Boston's Department of Urban Planning and Community Development and Pre-Collegiate Program, in collaboration with the Boston Planning and Development Agency, Boston Public Schools, and Madison Park Technical Vocational High School, launched a new summer immersion program to introduce Boston youths of color to the many desirable public service careers available within the fields of urban planning, design, and development.

The overall goal of this initiative is to increase the percentage of planners of color in Boston from 5.75 percent to 24 percent during the next 15 years.

"While Boston has emerged as one of the nation's most diverse metropolitan regions, people of color are significantly underrepresented within our region's urban planning and design professions," said Ken Reardon, professor and chair of the Department of Urban Planning and Community Development. "UMass Boston's newly launched Summer Program in Urban Planning at Madison Park Technical Vocational High School in Roxbury reflects our campus's commitment to address this issue."

Students participating in the 2022 Summer Program in Urban Planning devoted 20 hours a week throughout the month of July to enhancing their understanding of the critical role urban planners play in investigating and designing strategies to mitigate the impact of extreme heat on local communities. Using mobile heat sensors and smart phones, these high school students worked with UMass Boston urban planning students and faculty to measure indoor and outdoor air temperatures at schools, social service agencies, area businesses, housing complexes, and parks in their Roxbury communities to locate and map urban heat islands, where extreme temperatures threaten public health.

Students who complete the program will have the opportunity to enroll, tuition free, in two UMass Boston urban planning classes during the coming academic year. Following their completion of these courses, they will be invited to complete a twelve-week paid internship with a major public and/or private urban planning agency during the summer of 2023.

TAG Celebrates Graduation, Return of In-Person Summer Program

UMass Boston's Talented and Gifted (TAG) Latino Program and Project ALERTA celebrated its in-person 2022 summer program at a closing ceremony in University Hall in August. The ceremony marked the 38th year of the programs, which were established to provide academic, personal, and social engagement for Hispanic students in Boston Public Schools.

The TAG and ALERTA programs prepare 120 BPS Latino students and English Language Learners in grades 5–8 to excel and succeed in the upcoming school year.

"This is education at its best," said Chancellor Marcelo Suárez-Orozco, congratulating participants. "You could have spent this part of the summer doing other things—chilling with your friends, going to the beach, playing sports. But instead, you chose STEM classes, current events conversations, and enrichment courses in urban farming, art, and music! You chose to learn. And this tells me that, not only are you talented and gifted, but you know how important your education is—to your families, to yourselves, and to your future."

During the five-week summer program, students take academic classes in the morning and enrichment activities in the afternoon. The program aims to cultivate young citizens who can respond to their local and global communities' needs in the areas of art, math and science, education, social development, and social justice.

Strengthen the University's Research and Development Enterprise

UMass Boston Receives \$1.6 Million for New Biophysical Core Facility

UMass Boston received \$1.6 million in funding from the Massachusetts Life Sciences Center to establish a new Biophysical Instrumentation Core (BIC) facility. The facility will bring cutting-edge instrumentation, methodologies, and expertise to the research community at UMass Boston and beyond.

The Biophysical Instrumentation Core will greatly expand life sciences research infrastructure at UMass Boston and enable university researchers to tackle areas that currently are inaccessible. BIC's advanced instrumentation will also be available to universities, colleges, start-ups, and biotech companies in the area.

The BIC will serve researchers tackling life sciences questions at many different levels, from basic understanding of biological processes to characterizing protein-drug interactions. It will also allow researchers at UMass Boston and elsewhere to perform critical analysis of their samples for explorations of anti-cancer treatments.

The new facility will provide undergraduate, graduate, and post-doc students with the opportunity to get hands-on training experience with the cutting-edge instrumentation by directly interacting with the life sciences industry in Massachusetts.

"I really hope the BIC expands research capabilities at UMass Boston to enable our faculty to tackle new research questions that were previously difficult or unattainable," Associate Professor of Chemistry Daniel Dowling said. "I'm looking forward to building new connections with start-ups and local industry members who will be able to use the facility to expand their projects."



Professor of Biology Nichola Hill samples a Western sandpiper.

New Study by UMass Boston Professor Looks at How Bird Flu Spreads

A highly pathogenic avian influenza—more commonly known as bird flu—has been rapidly spreading across the globe and in the past months has finally entered the U.S. Although risk to humans is low, H5N1 has so far led to U.S. farmers euthanizing more than 37 million poultry in mass culls to prevent the deadly virus from spreading. The toll on wild birds is just as alarming, with infections and deaths documented in over 50 species, including bald eagles and owls.

Professor of Biology Nichola Hill, who studies how viruses jump to new species, is the lead author of a study released earlier this summer in the journal *PLOS Pathogens*, which uses historical data to look at how bird flu transmits among different groups of birds, and which birds are super spreaders of the virus. The study findings have the potential to refine and enhance global surveillance of bird flu and outbreak prediction.

"Resources for disease surveillance are limited," Hill said. "We need to be informed and make decisions about when, where, and how to target limited resources to get in front of the next emerging virus. . . . When you have proactive surveillance in place you can say, 'OK, here and now is where we need to ramp up biosecurity on farms and heightened public awareness of wild bird mortalities.'"

Along with colleagues at the Runstadler Lab at the Cummings School of Veterinary Medicine at Tufts University and other experts in the field, Hill looked at long-term, historical data to find patterns and determine which birds were really driving global spread.

Hill's research also found that while surveillance efforts have been mainly based in Alaska, or other breeding grounds in temperate regions, it will serve scientists well to build up surveillance in local areas such as Cape Cod in New England.

Strengthen the University's Research and Development Enterprise (cont.)

Chemistry PhD Student Receives Research Award from Department of Energy



Genevieve Asselin

Chemistry PhD student Genevieve Asselin has received a research award from the U.S. Department of Energy's Office of Science Graduate Student Research (SCGSR). The SCGSR award is given to outstanding U.S. graduate students to pursue part of their

graduate thesis research at a Department of Energy laboratory/facility in the areas that address scientific challenges central to the Office of Science's mission.

Asselin will conduct her research at the Advanced Photon Source facility within the Argonne National Lab in Lemont, Illinois. She will be researching the potential-dependent solution structure of magnesium electrolytes using high energy X-rays to gather information about local atom-atom coordination in the liquid phase to ultimately build a better understanding of how magnesium electrolytes work.

"I feel very lucky and grateful for the opportunities that I have been afforded and the support from my PI [principal investigator] Assistant Professor of Chemistry Niya Sa, and the beamline scientist, Wenqian Xu, who I will be working with at Argonne," Asselin said. "Most people don't get the chance to use the beamlines at the Advanced Photon Source, but I'm glad I will be one of them."

Report Details Latest Climate Risk Projections for Greater Boston Area

In a five-year update to research on likely climate changes in the Boston area, researchers from UMass Boston this summer released findings from the Greater Boston Research Advisory Group Report (GBRAG), entitled *Climate Change Impacts and Projections for the Greater Boston Area*, which provide detailed information on projected changes over this century to temperature, storms and precipitation, flooding, sea-level rise, and groundwater in the Greater Boston area.

The findings of this report underscore that reaching net-zero emissions by 2050 is an essential part of achieving the best outcomes for the City of Boston and the Greater Boston area. However, the report warns that action in Greater Boston alone cannot prevent the worst-case scenarios, *all* nations around the world *must* also reach net-zero emissions by 2050 to prevent catastrophic levels of warming and sea-level rise.

The report highlights familiar warnings around increased frequency of extreme weather events, but also spotlights under-reported climate risks like decreased groundwater recharge, which has far-reaching consequences for infrastructure, agriculture, the availability of drinking water, and more.

The GBRAG is comprised of leading scientists from the northeastern U.S. and led by UMass Boston's School for the Environment. Funded by the Barr Foundation, its purpose is to provide the City of Boston and surrounding municipalities with updated information that can be used to inform near-term and long-term strategies to address climate mitigation and resilience.

"With this new information, the City of Boston and Metropolitan Area Planning Council cities and towns are armed with the most up-to-date research representing an analytic backbone for development of climate adaptation and mitigation plans and policies for these regions," said co-lead Ellen Douglas, a professor at the School for the Environment.



Scan this QR code for a copy of the report.