



UNIVERSITY of WISCONSIN
GREEN BAY

RESEARCH ON THE

RISE



OFFICE OF GRANTS AND RESEARCH 2021



“We are so pleased that UW-Green Bay continues to build and contribute to real-world scholarship, discovery and creative inquiry that has wide-ranging transformational impact on the lives of our students, faculty and staff, community and beyond. Research is on the RISE!”

Kate Burns
Interim Provost and Vice Chancellor for Academic Affairs

“We are immensely proud of this report as well as the boundless energy and diligent work of those students and researchers highlighted herein — and all those across our University whose research and creative activity is making an impact on our campus, community, state and nation. Research and sponsored activity is truly foundational to the future of UW-Green Bay, and the Office of Grants and Research works tirelessly to support, guide and celebrate research, our researchers and the institution-wide initiatives that are moving UW-Green Bay forward.”

Dr. Pieter A.P. deHart
Associate Vice Chancellor for Graduate Studies

“The UW-Green Bay Office of Grants and Research is thrilled to partner with the Office of University Advancement to highlight just a snippet of the terrific work taking place across our four locations of Green Bay, Manitowoc, Marinette and Sheboygan. The office is privileged to work with faculty, staff, students, administrators and collaborators to nurture, support and celebrate research and sponsored program activity in all of its incarnations.”

Roger Wareham
Director, Office of Grants and Research

The Office of Grants and Research supports faculty, staff and students in their research, creative and scholarly activity. We provide encouragement and guidance through the funding process, and answer all questions regarding grant funding. We celebrate research every day across our campus in each of our colleges, and are proud of our ever-growing student researcher population. We believe research and scholarly activities are not limited to the sciences but expand out to creative activities, social sciences, human studies, education and the arts.

We believe in building a better campus in order to serve our Greater Green Bay community.

Interested in learning more about grants and research?

CONTACT:

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FRIENDS, SUPPORTERS AND COMMUNITY MEMBERS:

Research is on the RISE at the University of Wisconsin-Green Bay.

As the state’s youngest regional comprehensive university, UW-Green Bay has made an enormous impact on our region, state and beyond. That has been driven in no small part by the amazing research that is happening here.

The breadth of research at the University has grown tremendously in recent years. This reflects our high-quality faculty, staff and students across all campus locations, as well as our culture of continuous innovation and fearless efforts to improve the health of our people and environment for the next generation.

This research is having increasing positive economic, social and environmental effects on our region and state through original intellectual and creative contributions across a wide range of disciplines. You’ll see in the pages of this report concrete examples of these contributions and how they have enriched the lives of our students, benefited the health of our ecosystem, and increased the educational outcomes and impact to our neighbors.

As you review the content in this report, if you have questions, would like more information about any of the projects described, other projects the University may be involved with or would like to discuss how you can support UW-Green Bay’s growing research activities, the Office of Grants and Research will be pleased to assist you. We are so excited to see how research continues to IGNITE the future!

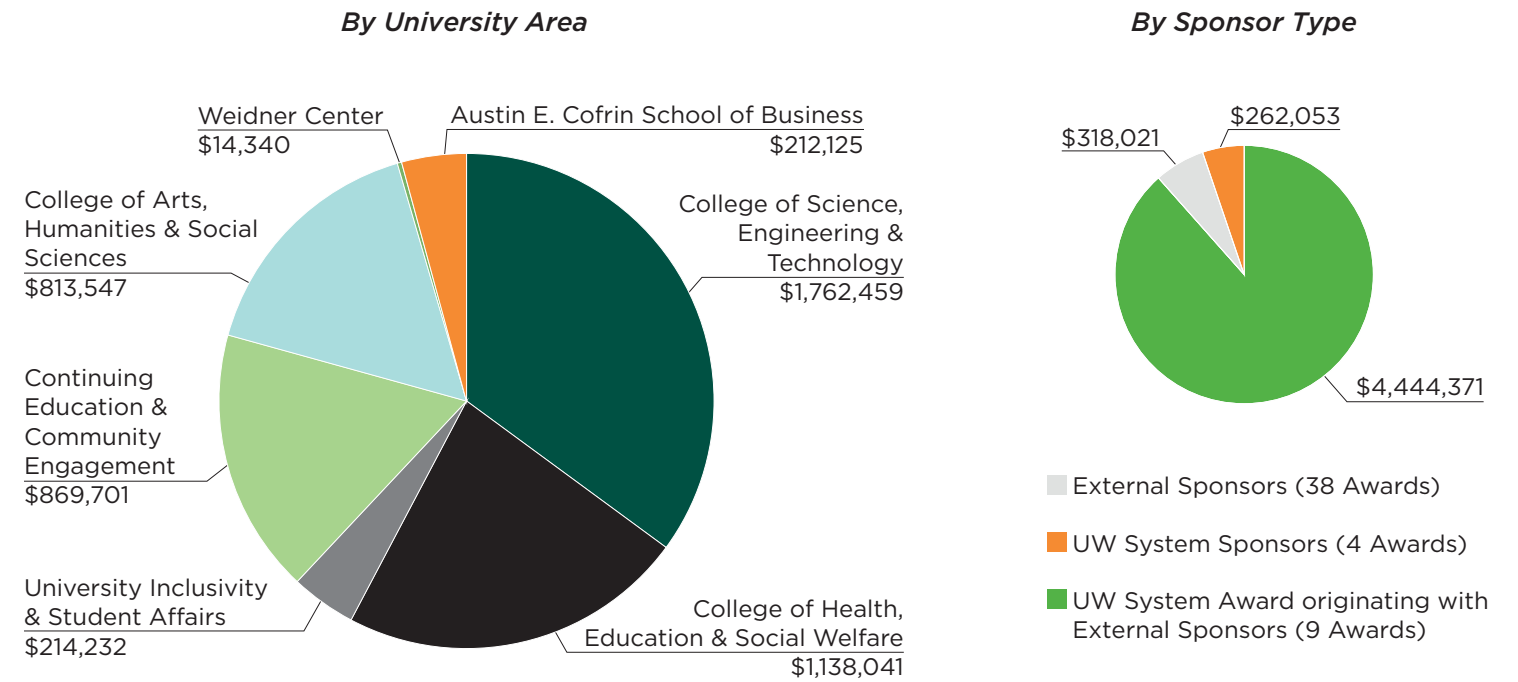
Best,

Michael Alexander
Chancellor

2021 SNAPSHOT

TOTAL SUPPORT FOR RESEARCH AND SPONSORED PROGRAMS FY21

***51 AWARDS MADE IN FY21: \$5,024,445**



*Including prior year proposals awarded FY21 *Excludes \$20.5M in COVID-19 relief funds

***95 PROPOSALS SUBMITTED IN FY21: \$20,261,617**



External Sponsors:	Internal Sponsors:	UW System Award originating with External Sponsors:
72 Submitted: \$19,090,261	14 Submitted: \$488,122	9 Submitted: \$683,234
38 Awarded: \$4,307,707	11 Awarded: \$322,053	3 Awarded: \$84,800
11 Pending: \$7,621,394	0 Pending:	6 Pending: \$598,434
23 Declined: \$7,161,160	3 Declined: \$166,069	0 Declined:

*Including FY20 proposals awarded in FY21

ON LAND OR ON WATER

STUDENTS SHINE IN WATER RESEARCH PROJECTS

By Freelance Writer MaryBeth Matzek

From the Menominee River to Lake Winnebago and many locations in between, Patrick Forsythe and his University of Wisconsin-Green Bay students are out in the field gathering data and specimens for water research projects before heading back to the lab to study their findings and share the vital information they've collected.

"There's a lot going on with the different research projects. We're not just doing one thing — we have multiple projects going on at once," he said. "My research projects are really student-centered. They're geared to give students experience, doing any number of aquatic ecology kind of techniques, sampling fish, sampling bugs, everything. Then there's the lab side and all of that work involved."

During the past 10 years, Forsythe has hired 30 to 40 undergraduate technicians to work on projects. *"Some have worked on their own individual projects while some have published papers on what we've done," he said.*

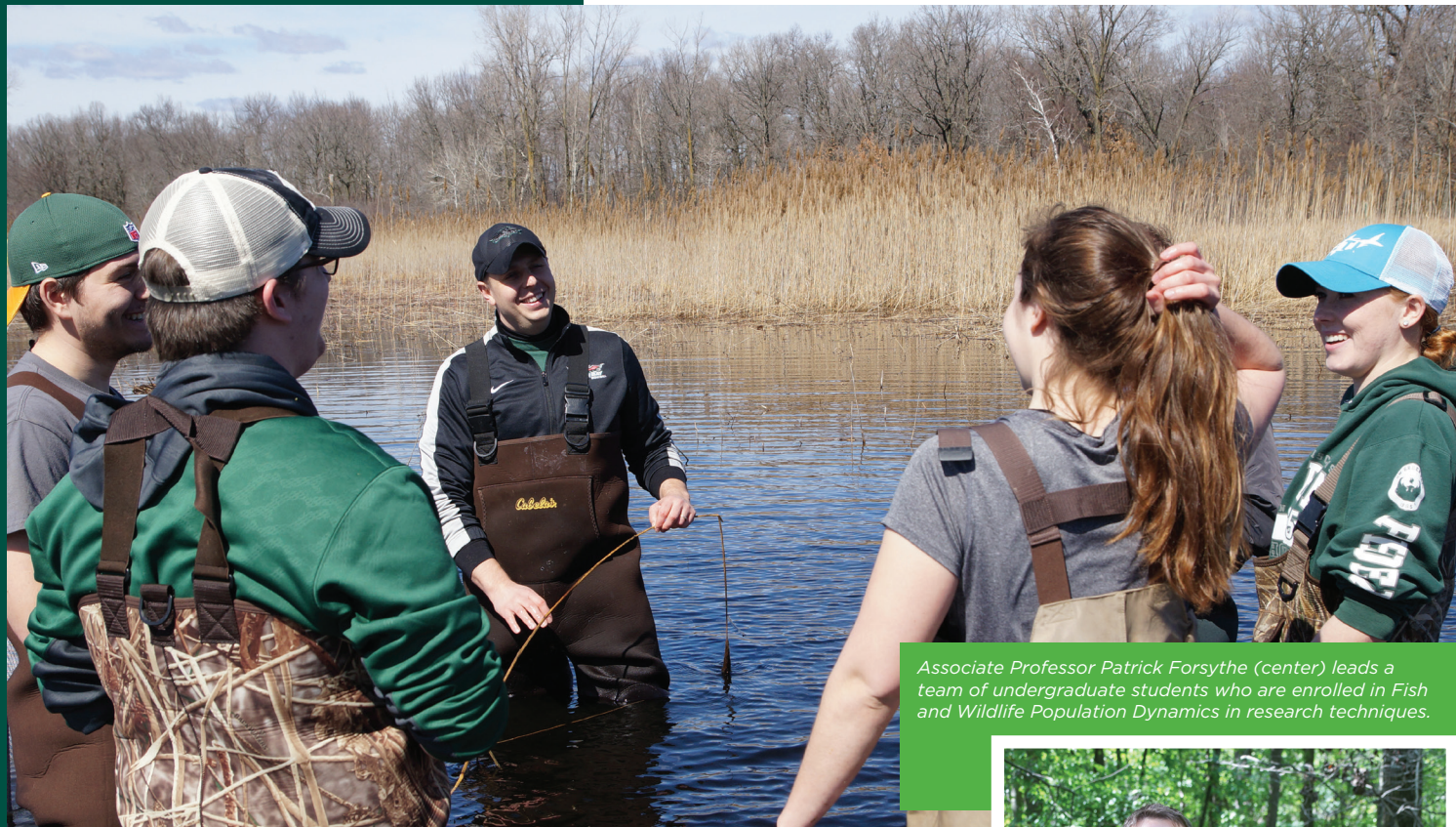
Forsythe's current research projects are wide ranging, covering several geographical areas and species. *"With us being so close to three vastly different bodies of water — Lake Michigan, Green Bay and the Fox River — it makes sense for us to become involved with water-related research," he said.*

On the Menominee River, which divides Wisconsin and Michigan's Upper Peninsula, Forsythe and his students are studying sturgeon to see if the fish diverted around the lower two dams will travel upstream to spawn.

"The question people have is, 'if you're going to spend all of this money and time moving the fish, will they actually go upstream and reproduce?' We're trying to answer that," Forsythe said.

With funding from WE Energies and the U.S. Fish and Wildlife Service through the Fish and Wildlife Restoration Act, researchers go out at night when sturgeon lay their eggs and collect specimen. Later, these specimen come back to the lab and students sequence the DNA to see if the larvae can be tied to the adults that were moved.

"It's a lot of effort, but you have to be there on site in order for the project to work. If we find the larvae are from fish who were moved around the hydroelectric facility, that tells us this is working and may lead to other passage projects around the Great Lakes," he said. "It's very exciting."



Associate Professor Patrick Forsythe (center) leads a team of undergraduate students who are enrolled in Fish and Wildlife Population Dynamics in research techniques.



Patrick Forsythe

Another project Forsythe and his students are working on involves collecting biological data from the Dutchmen and Ashwaubenon creeks, which are tributaries of the Fox River. Funded by NEW Water (the Green Bay Metropolitan Sewage District), researchers have collected ecological information, the habitat and also the biological organisms, such as fish and bugs, that live in those streams.

"It's an interesting project because there are two streams involved and it's a large watershed with a lot going on, such as industrialization, agriculture and residential home building," said Forsythe, adding the project has been going on for three years. "NEW Water is working primarily with the (agriculture) sector to design what I call the best management practices, whether it's establishing buffer areas along the river to prevent runoff, or working with farmers to help with soil conservation practices."

Once those best practices are in place, students will return to the field to see what changes may have occurred.

On the Fox River, Forsythe and his students are searching for two invasive species — the spiny water flea and round goby — to see if they have made it into Lake Winnebago. The work is being done for the Fox River Navigational System Authority, which is mandated by the state Department of Natural Resources to monitor water flows and the presence of any invasive species.

Forsythe and his students take samples from the mouth of the Fox River in Green Bay upstream all the way to Lake Winnebago. They monitor several times a year and collect samples.

"We've been impressed with the work Patrick and the students have done for us for the past three years," said Jeremy Cords, chief executive officer of the Fox River Navigational System Authority. "They help us through the monitoring to show what's happening."

Cords appreciates that students are so involved with the project. *"They are out there scooping out plankton in nets and going through what's in there. There's real hands-on learning going on," he said.*

Similar to the other projects, there is work done out in the field as well as back in the lab. Providing students with a variety of things to do is a source of pride for Forsythe. *"When my students leave my lab and graduate as either a graduate student or as an undergraduate, they've learned just about everything that they need to be successful," he said.*

As an extension of the Fox River project, one of Forsythe's students wanted to research which kind of traps work best



An environmental science student holds a large northern pike that was measured and tagged as part of research conducted by Associate Professor Patrick Forsythe's classes.

for catching the round goby. *"We'll soon be publishing that; it wasn't part of the original project, but a good off-shoot," he said. "It shows how our students can take projects we're working on and do their own research. What he's doing will help other people who are looking to trap the goby."*

On Lake Michigan, Forsythe has another project underway involving commercial fishermen and what they're catching. A graduate student is out on a fishing boat monitoring what comes in besides whitefish, which is the species the fishermen are most interested in.

"We're trying to not only get an estimate of how many fish are being harvested, but also what's coming in as bycatch, which are the other species collected during the process of commercial fishing," he said. "I think this will be an interesting project going forward for us."

SELECT RESEARCH SPONSORS

- Interior, U.S. Fish & Wildlife Service: Contributions of sturgeon passage to annual lake sturgeon recruitment in the Upper Menominee River, \$142,264
- WE Energies: Contributions of sturgeon passage to annual lake sturgeon recruitment in the Upper Menominee River, \$147,929
- Green Bay Metropolitan Sewage District: Biological data collection plan for the Dutchman and Ashwaubenon Creeks Watershed, \$113,177
- Fox River Navigational System Authority: Spiny water flea and round goby sampling and monitoring project, \$71,277

A LIFELINE IN TIME OF CRISIS

SBDC HELPS BUSINESSES SURVIVE, THRIVE

By Freelance Writer MaryBeth Matzek

It's been a busy year for Reynolds Packaging: Growing its employment count from four to 15 workers, hosting a visit from the Small Business Administration director, launching new products and winning the 2020 Marketplace Governor's Award in the woman-owned business category.

The Ashwaubenon business couldn't have done it without the support of the Small Business Development Center at the University of Wisconsin-Green Bay.

"We really relied on our consultant to help us in so many ways and help us find the necessary resources to not only survive but thrive," said Reynolds Packaging CEO Lisa Reynolds, adding that then SBA Administrator Jovita Carranza visited last summer to see the steps they took to grow their business through the pandemic. "We were in the middle of a big order and things were a bit busy, but it was wonderful to have her here and be in the spotlight."



Owners Kelly and Lisa Reynolds show Small Business Administration Administrator Jovita Carranza around their company, Reynolds Packaging, in the summer of 2020.

Funded in part by grants from the Small Business Administration and a program within the UW System Division of Business and Entrepreneurship, the SBDC provides no-cost consulting to business owners in 12 counties across Northeast Wisconsin. In 2020, the UW-Green Bay SBDC helped more than 1,300 businesses from startups to owners looking for a way to survive the pandemic. For many, it's a lifeline, providing advice, sharing resources and a listening ear. And in 2020, business owners were definitely looking for help.

After the pandemic hit, Center Director Tara Carr said the SBDC collaborated with UW-Green Bay's Continuing Education and Community Engagement (CECE) unit by "borrowing" three CECE employees for eight weeks to help the SBDC keep up with client demand during such unprecedented times.

"We created a unique strategy and that the most important thing was to help our community," she said. "We took a chance we would still meet our metrics and we did."

Located inside the Cofrin School of Business, the SBDC served 637 client businesses and 739 other businesses that didn't formally ask for assistance in 2020. *"We still doubled our metrics," Carr said. "We normally serve 350 clients a year. We made a huge impact for a number of businesses."*

The SBDC needs to annually meet different metrics including the number of clients served, new startups and capital infusion. The UW-Green Bay SBDC leads the state in capital infusion.

From the Paycheck Protection Program to Restaurant Revitalization Act, the SBA developed multiple products to help small businesses get through the pandemic. The SBDC is there to help clients discern what programs may help them, Carr says.

The SBDC pushes out the information it receives from the SBA to clients using social media and the Wisconsin SBDC COVID-19 website. Clients have reached out about local, state or federal relief programs, Carr said. If a client is searching for a SBA loan, they are referred to SBA lenders although the office does help with any financial preparation needed for the loan application process.



Reynolds Packaging added this machine in 2020 to help speed up production of personal protective equipment.



Tara Carr

Businesses can also tap into a one-stop shop website — <https://wisconsinsbdc.org/services/covid-19/> — which announces all of the latest relief packages and resources.

"The SBA is great at sharing information and we then do our part to make sure that information is shared with clients who can benefit from it," Carr said.

Businesses helped by the SBDC range from startups to small manufacturers in communities across the region providing them with the necessary support to grow. Those businesses, in turn, help grow the local economy as they expand or get off the ground.

During the pandemic, the SBDC created a triage center and proactively reached out to former clients to see what help they needed, and also connected with area economic development organizations that passed on requests for help.

"We did a lot of disaster mitigation," Carr said.

In a regular year, the SBDC's workload is quite different as consultants work with businesses to look at expansions, different funding opportunities or improve the way they do business. The office also offers onsite professional development training that is customized specifically for the goals and strategic direction of the company.

"Our skill set is all about helping businesses grow, such as increasing sales from \$2 million to \$5 million," Carr said. "Our staff is constantly sharpening their skills so they can help our clients."

Now that most businesses have made it through the pandemic, Carr said the UW-Green Bay SBDC is working with clients to re-evaluate where they were and how to refocus on the future and what's needed to get there.

"A lot of the discussion was based on what we can we do differently going forward ... and we continued to service business owners seeking to expand and people wanting to launch businesses," she said.

Beyond providing business consulting services and trainings, the SBDC also offers the Entrepreneurial Training Program, which assists upcoming entrepreneurs and current business owners in developing a feasible, strategic plan for a thriving, profitable business. The program reached out to high school students by offering an entrepreneurial class at Southern Door High School virtually once a week from September through January.

Like the businesses they served, the SBDC changed how it worked due to the pandemic. Instead of face-to-face meetings with clients, nearly everything went virtual, Carr said. *"In some of our more rural areas where the (broadband) connection isn't the best, we safely did some in person meetings to help our clients," she said.*



SERVICE AREA

The Small Business Development Center at UW-Green Bay serves the following 12 counties in Northeast Wisconsin: Brown, Calumet, Door, Florence, Forest, Kewaunee, Manitowoc, Marinette, Menominee, Oconto, Shawano and Sheboygan.

SBDC AT UW-GREEN BAY

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RESEARCH SPONSOR

- Small Business Administration, Small Business Development Center, \$159,110

A LOOK INTO THE CULTURE OF PERSONALITY

NIH-FUNDED STUDY LOOKS AT HOW CHILDREN LEARN RIGHT FROM WRONG

By Freelance Writer MaryBeth Matzek

Everyone has a moral compass, but at what age does it develop? Is it elementary school, preschool or even earlier? And what role does culture play? That's the question two University of Wisconsin-Green Bay professors are trying to answer.

UW-Green Bay psychology and human development professors Sawa Senszaki and Jason Cowell are working with groups of 3- and 4-year-olds from the Green Bay region and Japan to study cultural similarities and differences in children's moral judgements. With \$365,508 in funding from the National Institute of Health (NIH), the duo along with their students are researching "The Role of Parental Socialization in the Neurophysical Development of Moral Evaluation Across Cultures."

While the study is far from being done, the researchers said some cultural changes already have been noted. The children in the study wear an electroencephalographic (EEG) "hat" that measures and records neurophysiological brain activity while watching a cartoon.

"We've already noticed that in the U.S., parents talk about the action of a character, such as pushing someone, and why that action was bad. In Japan, parents talk more about the feelings of the person being pushed," said Cowell, an associate professor and vice chair of the psychology department.

Senzaki, who arrived at the University in 2013, has a background in cultural psychology and is interested in how parenting is shaped by culture. Most of psychology research is done in Canada, the United States and Western Europe, and Senszaki says she searches for ways to expand research with other cultures.

Cowell arrived at UW-Green Bay in 2015 with an interest in developmental neuroscience, including "looking" at children's brains as they're starting to learn new skills.

"Sawa saw how our research interests could fit together on a project," he said. **"It was the debate of nature versus nurture involving child development."**



Associate Professors Sawa Senszaki (left) and Jason Cowell are partners in a National Institutes of Health research grant.

Receiving the NIH grant was a big surprise — about 7 percent of all applications are successful — but one that Senszaki and Cowell definitely celebrated.

"It has opened the door for the research so that even more can be looked at," Cowell said. **"It's impressive a university the size of UW-Green Bay won this grant especially since the students involved are undergrads and not PhD candidates."**

The NIH grant allows the University to conduct more thorough research, Cowell said. **"It allows us to do some really cool research and recognizes we're a growing university and that we can enhance our students' experiences with research,"** he said.

Senzaki said the grant allows students to participate as paid research assistants. **"Being involved enhances their education,"** the associate professor in psychology said. **"Even if they don't go into research, they have learned what's all involved in research studies and that definitely broadens their educational outlook."**

Students participate in all parts of the study, from learning how to put the special EEG cap on a child's head to collecting data and writing about it. Study subjects are shown cartoons with characters doing "good" and "bad" actions with researchers monitoring their brain waves.

"We have had students report on the research done so far at different events," Cowell said. **"That's impressive to do while still an undergrad. It allows students to learn more about research and gives them a head start if they decide to pursue further education since they already have this experience."**

The research being conducted by Senszaki and Cowell is looking at questions people have had for centuries: When does morality develop? And what role does society play?

"The latest research shows morality develops starting at about 1 year old," Senszaki said. **"Humans are social creatures and need to navigate through social interactions. There are some biological human behaviors and then there are cultural factors as well."**

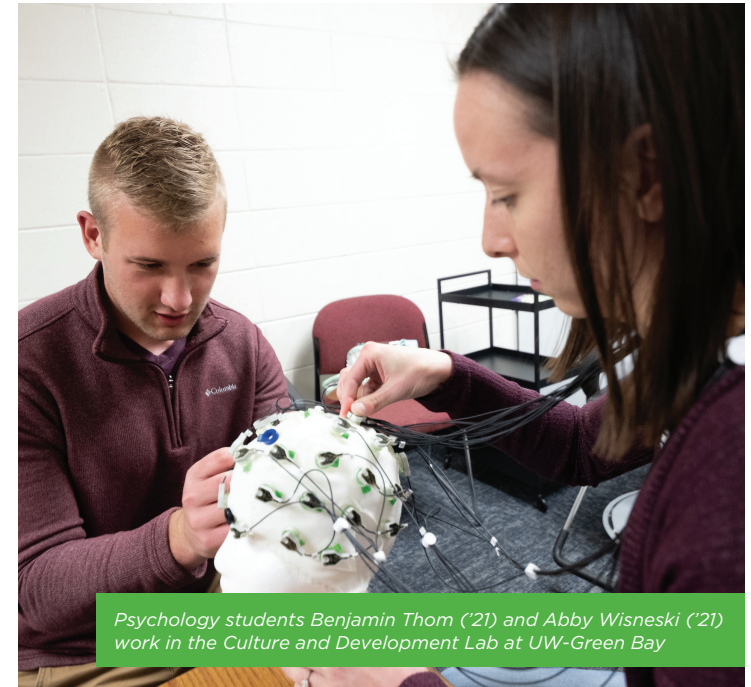
For example, something may be considered appropriate in one culture, but not in another culture.

The research project has been collaborative since the start. Senszaki looked at how parents transmit culture and morality to their children, and Cowell previously did research on how the brain tells children ages 12 to 24 months the difference between right and wrong.

"To get our project moving, we kept writing grants and finding ways to continue our work. The NIH grant confirms our work is valued and important," Cowell said.

As part of the project, Senszaki took a sabbatical and traveled to Japan where she worked with 80 children mirroring the work done at UW-Green Bay. **"We're doing the exact same work in both cultures,"** she said. **"When we're watching the children's brain waves, we work in milliseconds."**

COVID-19 delayed some parts of the research when the public was not allowed on the UW-Green Bay campus.



Psychology students Benjamin Thom ('21) and Abby Wisneski ('21) work in the Culture and Development Lab at UW-Green Bay

"We learned to be flexible just like everyone else," Cowell said. **"We did some research virtually via Zoom. It wasn't the same, but we developed different types of questions and were able to reach a larger sample — not just people living around Green Bay."**

External support is a necessity in undertaking the types of research Senszaki and Cowell have embarked on. Cowell said receiving the NIH award shows the work being done at UW-Green Bay is gathering more attention and prominence. "People have noticed what we're doing here, which is very gratifying," he said.

Senzaki says the project and NIH grant enhances UW-Green Bay's research capabilities on both a regional and national level. **"One benefit of the grant is that it exposes students to opportunities that are on par with some of the most prestigious universities in the country,"** she says.



A young child responds to images as psychology student Abby Wisneski prompts her in the Culture and Development Lab at UW-Green Bay.

RESEARCH SPONSORS

- DHHS, PHS, NATIONAL INSTITUTES OF HEALTH, the role of parental socialization in the neurophysiological development of moral evaluation across cultures, \$365,508

Research reported in this publication was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award Number R15HD094138. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

CRITICAL RESOURCES IN GOOD TIMES, BAD

BEHAVIORAL HEALTH TRAINING PARTNERSHIP OFFERS LIFE-SAVING TRAINING

By Freelance Writer MaryBeth Matzek

It's safe to say everything changed for the University of Wisconsin-Green Bay's Behavioral Health Training Partnership during the past 18 months. Not only did the program completely change how it operated, it also dealt with growing demand for its services from behavioral health providers who sought increased assistance as their workloads increased.

The Behavioral Health Training Partnership began in 2009 with 16 counties in Northeast Wisconsin to provide training, consultation and support services for county human services professionals and other community organizations. Today, it works with 66 counties and one Native American tribe.

"We focus on providing foundational training to county crisis workers who are helping people at some of the hardest times in their lives," said Behavioral Health Training Partnership Director Jessica Delzer. "We work with people from around the state discussing core values and best practices."

Training falls into one of three main areas: crisis services overview, suicide and risk assessment and Wisconsin's mental health laws.

Cori McFarlane, the deputy director of Health and Human Services in Door County, said the Behavioral Health Training Partnership provides an invaluable service to counties around the state.

"BHTP is a central hub for this critical training. Prior, counties had to do much on their own so this is more convenient and cost effective," said McFarlane, who was part of the initial committee that launched the organization.



Cori McFarlane



Tammi Kohlman

"In small counties, we have small staffs so when we need to have continuing education — prior to the Behavioral Health Training Partnership — we needed to develop the curriculum, find the information and create and teach the course," she said. "Having it delivered to us in a convenient way helps us make better use of our resources."

The training isn't limited to county employees. Partnering agencies, professionals and others, such as foster parents, also have been invited and come away with key learnings from the experience, McFarlane said.

Training offerings for behavioral health professionals is broad, ranging from courses on crisis debriefings to ethics. "We also do a post-training survey and ask what they would want more training in and try to address those requests," Delzer said.

Since 2014, the Behavioral Health Training Partnership has been the recipient of the Collaborative Crisis Intervention Services for Youth (CCISY) Grant for the Northeast Region of Wisconsin. The grant's purpose is to expand and improve crisis and other behavioral health resources to youth experiencing a crisis and/or at risk of suicide. The grant allowed the creation of some new tools, including identifying a universal suicide screening tool — the Columbia Suicide Severity Rating Scale — that is used by all crisis staff.

Working with the Behavioral Health Training Partnership has helped Destination Zero Suicide Prevention Initiative in Fond du Lac live out its mission, said program coordinator Tammi Kohlman.

"We collaborated with BHTP to provide both in-person and virtual trainings and these were consistently positive experiences," she said. "The staff communicated clearly and effectively, and assisted with every step of the process."



Behavioral Health Training Partnership Director Jessica Delzer (from left) stands with Program Associate Andréa Meulemans and Training Coordinator Joanne Tulachka on the UW-Green Bay campus.

"They helped us decide which trainings to offer based on our intended audience and desired outcomes."

Kohlman said the Behavioral Health Training Partnership was easy to work with and were flexible throughout the experience.

Discussing best practices is a vital part of the training process, Delzer said. Workers and volunteers learn the best way to approach a situation and help the person in need without causing the situation to escalate.

"It's invaluable that we can offer our services to professionals who are out there on the frontlines delivering crisis care. The caregivers learn what's needed (to do in a situation) and it benefits the community as a whole," she said.

Prior to March 2020, the Behavioral Health Training Partnership provided its training through interactive classes and self-paced online courses. When the pandemic hit, the organization quickly shifted everything online.

"We did what was necessary to support our learners in the live, online training," Delzer said. "It wasn't easy, but we were able to make that switch. And in making the switch, we found we were able to reach a broader audience since no travel was involved to get to the trainings."

Switching to online training changed Behavioral Health Training Partnership's work and will affect it going into the future, she continued. *"Some classes are better to have in person and we hope to get back to that when the pandemic is over."*

McFarlane said assistance from the Behavioral Health Training Partnership was vital during the past year as the county saw its workload increase as more people suffered from behavioral health issues and there was a greater

demand for crisis intervention programs. *"We're just incredibly busy."*

The Behavioral Health Training Partnership also focused its attention on behavioral care workers to make sure they were handling the increased stress from the pandemic, Delzer said. *"We talked about self-care for themselves and worked with supervisors so they can provide support to frontline workers."*

While the Behavioral Health Training Partnership receives funds from participating counties and a few state funds, grants and contracts are the primary resource for funding.

"Without grants, we wouldn't be able to provide the high quality training sessions," Delzer said. "The work we do is critical since we are training people who are making life and death decisions. They are out there helping people at the worst time of their lives."

SELECT RESEARCH SPONSORS

UW-Green Bay's Behavioral Health Training Partnership's work is funded primarily by grants. The program has been sponsored by:

- Health and Human Services, Department of Collaborative Crisis Intervention Services to Youth (CCISY) — Sustainability, \$301,672
- Wisconsin Department of Health Services, Collaborative Crisis Intervention Services to Youth, \$152,312
- Mental Health America of Wisconsin Zero Suicide Training Logistics Coordination, \$54,856

RESEARCH RISES ON THE BAY

NERR DESIGNATION MAY LEVERAGE RESOURCES FOR RESEARCH PARTNERSHIPS

By Freelance Writer MaryBeth Matzek

Many people may not realize it, but Green Bay is the world's largest freshwater estuary, a semi-enclosed area in the Great Lakes where lake water and water from rivers and streams meet. The University of Wisconsin-Green Bay hopes its unique location will help it secure a National Estuarine Research Reserve (NERR) designation.

Becoming a NERR would provide more resources to address problems in Green Bay and Lake Michigan, including changing water levels, algae blooms, flooding and coastal erosion.

UW-Green Bay is leading the process to have Green Bay declared a NERR. Nationwide, there are 29 coastal sites, including the Great Lakes, designed to protect and study estuaries and their coastal wetlands. There are two on the Great Lakes, including one on Lake Superior, which is managed by UW-Madison's Extension Division.

"The NERR designation isn't just for the University or Green Bay. It's something that will benefit the entire region," said Emily Tyner, UW-Green Bay's Director of Freshwater Strategy. "Hosting the NERR could enable new initiatives in the region by leveraging nationwide programs."

She added becoming a NERR doesn't preclude existing water uses or come with any additional regulations. Sites for the NERR also will be on publicly owned land so no additional property will need to be purchased.

Water plays a critical role in Wisconsin's economy since it's bordered by water on three sides, said Matt Dornbush, Dean of the Austin E. Cofrin School of Business at UW-Green Bay. Dornbush, who was a scientist before moving into college administration, was associate provost when the project began and is still engaged with it.

"Water resources play an increasing role in the viability of the state's economy," he said. "Water is important in the local economy. In addition, people live here because of our water resources."

Established through the Coastal Zone Management Act, the reserves



Matt Dornbush



John Katers



Emily Tyner

are a partnership between the National Oceanic and Atmospheric Administration (NOAA) and coastal states. While NOAA provides funding and national guidance, each site is managed on a daily basis by a state agency or university with input from partners. Upon designation as a National Estuarine Research Reserve, UW-Green Bay will coordinate the management, restoration and protection of the Green Bay ecosystem. The NERR also includes research, education, stewardship and training operations.

Becoming a NERR is a lengthy process, but one that is worth it, Tyner said. UW-Green Bay is currently in step two of the six step process — the evaluation of potential sites. ***"Our goal is to finish the site selection process by 2022 with the management plan complete by 2024," she said.***

The designation process began in 2019 when Gov. Tony Evers submitted a letter of intent to NOAA for the bay of Green Bay to be chosen as a NERR location. Tyner and the University are spreading the word about the benefits of having the bay of Green Bay named a NERR location, as well as making clear that the designation won't affect commercial or recreational activity in the bay.

"We need to educate the public and our stakeholders. That means doing a deliberate, thorough job of telling people what it's about, making sure questions are answered and soliciting public input on what their vision for what the bay of Green Bay NERR can be," Tyner said.

John Katers, dean of the College of Science, Engineering, and Technology, said having a NERR will attract more attention to the unique ecosystem in Green Bay's backyard.

"The work being done will look at what we can do to make the ecosystem's health improve," he said. "It will definitely be a hub to bring researchers to the area. There will be basic research done, which is done at all NERRs, such as looking at water levels and temperature, but then there will be the opportunity for a lot of individual projects as well."

GREEN BAY WATERSHED



The current stage of designation also includes the

criteria for selecting a site and then determining possible sites. A final site is then nominated and sent to NOAA.

Besides time, it also will require funding support to bring the NERR to fruition. ***"A lot of fundraising will be necessary as we take different steps along the way, but once we receive the NERR designation, 70 percent of future funding will come from the federal government," Tyner said. "We have a lot of partners we are working with."***

Dornbush said water resources in the region face issues that the NERR can address, such as invasive species, runoff and industrial use of water. ***"Complicated issues require a coordinated response," he said.***

UW-Green Bay has multiple factors in its favor for being named a NERR site. First, the University's four campuses are all near the water and run the distance from the border with Upper Michigan south to Sheboygan. Secondly, water-related research isn't something new for UW-Green Bay.

"The University also has a long history of research, we're also involved in the Cat Island Restoration plan and we did some of the foundational work for the Fox River cleanup," Tyner said. "With our location, it's important to be involved in freshwater research."

A lot goes into the site selection, Katers said. ***"The NERR will not only have a visitor's center that will attract attention and welcome visitors, but also labs where people can do their research," he said.***

Being named a NERR will attract more researchers to the region and "we'll also obtain resources we might not have had before," Dornbush said.

"It's important for us to lead in areas important to the region and state, and water fits with that. Water is critically important to our region — that's what brought people here," he continued. "Water will become an increasingly important part of our future."

SELECT RESEARCH SPONSORS

- Greater Milwaukee Foundation (Fund for Lake Michigan), National Estuarine Research Reserve, \$150,000
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Green Bay National Estuarine Research Reserve, \$60,000
- Private funding through the UW-Green Bay Foundation



Assistant Scientist Christopher Houghton explains measurements on the depth meter of the RV Phoenix, UW-Green Bay's research vessel, to Wes Garner, of GLC Minerals, and Michele Schuler, Microsoft TechSpark, as Emily Tyner, Director of Freshwater Strategy (center) and John Katers, Dean of the College of Science and Technology, listen.

RESEARCH AND SPONSORED PROJECTS AT A GLANCE



INSTITUTIONAL PROJECTS

CCAMPIS, \$80,000+

UW-Green Bay was awarded a competitive Child Care Access Means Parents in School (CCAMPIS) grant from the U.S. Department of Education in October 2020. The funding of more than \$80,000 annually for four years is providing child care support for students with high financial need, as well as supporting planning for a potential child care facility.

Project Lead: Corey King, Vice Chancellor, Division of University Inclusivity & Student Affairs



Fund for Wisconsin Scholars, \$4,368

The Fund for Wisconsin Scholars is a private sponsored program that provides need-based grants to graduates of Wisconsin public high schools attending University of Wisconsin four-year colleges and universities.

The program also supports a peer mentorship component in which junior and senior scholarship recipients mentor first-year and transfer scholarship recipients. UW-Green Bay was awarded \$4,368 for the 2020-21 FFWS Peer Mentoring Program.

Project Lead: Vince Lowery, Director of Student Success and Engagement

Upward Bound, \$300,000

The Upward Bound Program is a comprehensive college-preparatory enrichment program designed to serve high school students from low-income and/or first-generation families at no cost to them. UW-Green Bay has received funding from this federal TRIO program through the U.S. Department of Education for the past 32 years. In 2021, UW-Green Bay received more than \$300,000 to serve 80 students in East, Preble, Southwest and West high schools in Green Bay to provide tutoring, counseling and opportunities to prepare students for college success.

Project Lead: Michael Casbourne, Director, TRIO & Precollege Programs



Gear Up, \$1.3 million

UW-Green Bay's Office of Continuing Education and Community Engagement has partnered with the state Department of Public Instruction (DPI) to provide services to participants in the DPI's Gaining Early Awareness and Readiness

for Undergraduate Programs (GEAR UP) program. GEAR UP is designed to assist low-income students in grades six through 12 at target schools to obtain a high school diploma and prepare for college. Thus far, \$1.3 million has been awarded to support GEAR UP programs including dual enrollment college credits, summer overnight camps on campus, STEM after-school programming, advising, college readiness workshops and campus visits.

Project Lead: Meaghan Strehlow, Executive Director, K-12 & Community Relations, Division of Continuing Education and Community Engagement



COLLEGE OF ARTS, HUMANITIES AND SOCIAL SCIENCES

Greater Green Bay Community Foundation, \$10,000

The Microsoft Journalism Initiative in collaboration with the Greater Green Bay Community Foundation awarded the College of Arts, Humanities and Social Sciences \$10,000 in spring 2021 to support the creation of Fourth Estate Media - a faculty and student-run campus platform for multimedia content. This platform will host content including news, podcasts, videos, vlogs/blogs, data visualization, investigative journalism, television, entertainment, streaming radio, social media and other media resources.

Project Lead: Chuck Rybak, Dean, College of Arts, Humanities, and Social Sciences

The Teagle Foundation / National Endowment for the Humanities, \$30,000

Professor Mark Karau and a team of humanities faculty were notified in June 2021 of a \$30,000 award for a one-year planning project from the National Endowment of the Humanities and the Teagle Foundation. The team will work on a common core of courses in the humanities that will illuminate pathways to help students navigate a coherent and meaningful set of general education courses.

Project Lead: Mark Karau, Professor, History and Humanities



COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

WiSys and Fund for Lake Michigan, \$187,999

Dr. Mike Holly, an engineer in the new interdisciplinary Water Science program, has received funding for his work in the environmental fate and treatment of chemicals created or concentrated by human activity, including excess agricultural phosphorus and the "forever chemicals" PFAS. The Fund for Lake Michigan has provided \$48,000 to support a project in collaboration with UW-Milwaukee to design and test new media for filtering phosphorus from agricultural runoff. Funded by a \$139,999 grant from UW System research partner WiSys, Holly will lead a multicampus investigation into PFAS and nitrate content of sewage sludge and treatment options for safe land application of the sludge.

Project Lead: Mike Holly, Assistant Professor, Environmental Engineering

American Philosophical Society, \$6,000

Assistant Professor of Geoscience Shawn Malone arrived in fall of 2020 having just received a \$6,000 grant from the American Philosophical Society to support field work in Wyoming to involve students in sampling and age-dating some of the oldest samples of the Earth's crust in North America. This data will help to improve models of early plate tectonics while exposing students to research-driven applications of their classroom learning.

Project Lead: Shawn Malone, Assistant Professor, Geology



COLLEGE OF HEALTH, EDUCATION AND SOCIAL WORK

Wisconsin Department of Family and Children, \$400,000

UW-Green Bay is one of four state universities contracted by the state Department of Family and Children to provide training for the state's child welfare workforce. Associate Professor of Social Work Jolanda Sallmann leads the Public Child Welfare Training Stipend Program at UW-Green Bay. This program provides student scholarships and an approved curriculum to students who agree to work in the child welfare sector in Wisconsin after graduation. In fiscal year 2021, UW-Green Bay received more than \$400,000 for curriculum support through this program.

Project Lead: Jolanda Sallmann, Associate Professor, Social Work



Badger Nurses Collaborating on Covid-19 Vaccine Education and Delivery (BN-CoVED), \$40,000

In late 2020, Professor Christine Vandenhouten, chair of UW-Green Bay's Nursing and Health Studies department, teamed with the UW-Madison School of Medicine & Public Health to engage nursing students to help deliver vaccines and education to the campus and the greater Green Bay community. A \$40,000 grant from the Wisconsin Partnership Program helped support this rapid mobilization.

Project Lead: Christine Vandenhouten, Professor and Chair, Nursing & Health Studies

COVID-19 RELIEF FUNDS

Since March of 2020, the federal government has provided a series of emergency funding infusions to colleges and universities to help them respond to the coronavirus pandemic and mitigate the financial challenges experienced by students and campuses.

\$24M+ Total federal emergency funding received by UW-Green Bay as of 2021

\$3M+ Direct student aid disbursed to more than 2,000 UW-Green Bay students. Another \$6M will continue direct support to students.

\$500,000+ Support for COVID-19 testing facilities at UW-Green Bay's four campuses

OTHER USES OF COVID-19 RELIEF FUNDS:

- Hardware, software, IT infrastructure and training for instructors and students
- Reconfiguration, additional materials and increased cleaning of classrooms and labs to continue with limited in-person activities
- Emergency support resources for students including housing, meals and travel expenses when dorms closed mid-semester, and internet access for students without home access
- Refunds of student fees for housing, food service and other campus services
- Restoration of almost \$1.5M budget cut from UW-Green Bay's FY20 allocation of general purpose revenues



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This report published in partnership with:
Office of University Advancement

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