College of Letters & Science



UWM grad shares long journey to the White House

UCUS

By Kathy Quirk, University Relations

Sequoia Baker capped her tenure at UWM with a four-month spring internship on first lady Michelle Obama's communications team. A Facebook post she wrote about the journey from a challenging childhood to the White House garnered more than 7,000 hits. ABC News picked up the story (http://abcn.ws/28T99Ye). Baker, who earned her bachelor's degree in Political Science with a minor in Journalism in May, talks about the experience.

First of all, how does it feel to be famous now that your story got picked up by ABC?

That's been incredible. Someone shared my post on Facebook with a page that I wasn't formerly familiar with, Because of Them We Can. That community kind of rallied around it, and people shared their own stories.

How were you selected for the internship?

Sequoia Baker, a Political Science major at UWM, spent her final semester of school interning in the office of the First Lady of the United States Michelle Obama. Baker graduated in May. (Photo courtesy of Sequoia Baker.)

I always had this idea of applying, but just didn't think it was for me or that I was qualified. But after two years in county government [as a legislative aide], I got the confidence to go ahead and apply. I filled out the application right here in the UWM Library in September. I worked on it nonstop over a weekend.

What kind of work did you do in your position at the White House?

I was responsible for just everyday tasks that come through the first lady's press office as well as regular events hosted by the first lady – special events like state dinners or fun events like the Easter Egg Roll. Basically, whatever landed on my desk.

How did UWM help you?

My experience and my courses all prepared me for that internship. However, just getting used to the pace in the East Wing was definitely a steep learning curve.



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Prairie dogs in the western United States can carry fleas that carry the bacteria that causes plague in humans and animals. This rodent is from one of the populations being studied by researchers hoping to better manage plague ecology. Photo courtesy of Rachael Giglio.

Of prairie dogs and plague By Sarah Vickery, Letters & Science

Most people think of medieval Europe when they hear the term "bubonic plague," but these days, you should be picturing prairie dogs.

Rachael Giglio is working toward her PhD in Biological Sciences at UWM. As part of her thesis, she is using the genomes of prairie dog species in the western United States to better understand how *Yersinia pestis*, the bacteria that causes plague in humans and other mammals, traverses the landscape, carried by these rodents.

"We don't know a lot about it, surprisingly. It's something that people get really excited about or are kind of scared of, and you'd think we would understand more about it, but we don't," Giglio said. "We know that plague is transferred mainly by fleas, and that these fleas are usually host-specific. Prairie dogs have their own suite of fleas. But, somehow, plague is being transferred between colonies of prairie dogs. Small rodents likely play a role, but we don't know how."

Giglio began studying the problem with her mentor, Biological Sciences professor Emily Latch, and colleagues working with the United States Geological Survey who have been studying plague ecology for years. Giglio will sift through the enormous amounts of data gathered from affected prairie dog populations and combine it with cutting-edge genomic data to provide insight into plague trasnission dynamics.

Giglio, who also completed her Master's degree at UWM under Latch, was eager to work on a project that applied her skills profiling DNA sequences in wildlife populations.

Giglio's job is to look at the DNA samples taken from prairie dog populations over the course of five years. By looking for similarities within individual samples, she'll be able to tell which prairie dogs moved to different colonies, mated, and reproduced, thereby spreading their DNA. Of course, when prairie dogs move between colonies, they carry their fleas and bacteria with them.

Right now, scientists have no idea how common it is for prairie dogs to move around. That's one of the questions Giglio is hoping her work will answer.

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Gravitational waves detected from 2nd pair of black holes

By Laura Otto, University Relations

An international team of scientists – including physicists at the University of Wisconsin-Milwaukee – has detected gravitational waves for the second time.

The gravitational waves were observed Dec. 26 by the twin Laser Interferometer Gravitational-Wave Observatory (LIGO) detectors in Livingston, La., and Hanford, Wash.

The first detection of these waves, announced in February, was a milestone in physics and astronomy; it confirmed a major prediction of Albert Einstein's 1915 general theory of relativity and marked the beginning of the new field of gravitationalwave astronomy.

"This second detection tells us that the first detection wasn't some sort of lucky break," said Patrick Brady, director of the Leonard E. Parker Center for Gravitation, Cosmology and Astrophysics at UWM. "Gravitationalwave astronomy has truly started."

Gravitational waves are ripples in the fabric of space-time that are caused by the



Physicists at UWM who are part of the international team that has detected gravitational waves for a second time include Patrick Brady (from left), Jolien Creighton, Alan Wiseman and Xavier Siemens. (UWM Photo/Pete Amland)

movement of massive objects in space. The waves carry information about their origins and about the nature of gravity that cannot otherwise be obtained, and physicists have concluded that these gravitational waves were produced during the final moments of the merger of two black holes about 1.4 billion years ago. The collision of the two black holes created a single, more massive spinning black hole that is 21 times the mass of the sun.



The discovery, which will be described in an article accepted for publication in the journal *Physical Review Letters*, was made by the LIGO Scientific Collaboration, a group of more than 1,000 scientists (including approximately 250 students) from universities in the United States and other countries, and the Virgo Collaboration, consisting of more than 250 scientists from 19 European research groups.

Along with Brady, UWM's team includes faculty members Jolien Creighton, Xavier Siemens, and Alan Wiseman and 26 other scientists and students. UWM also contributed significant computer resources to the data analysis that identified both events.

It is a promising start to mapping the populations of black holes in our universe, Brady said. Because black holes are not visible even with the most powerful telescopes, scientists know relatively little about them.

"Black holes are formed when massive stars die," he said. "But we know very little about how many black holes are out there, how massive they are, or how fast they spin. This discovery is a major step toward finding the answers to these questions."

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UWM alumna's passion helps prison pregnancies

By Sarah Vickery, Letters & Science

A doula is a birthing professional who provides information and emotional and physical support to expectant mothers. They are usually hired by private clients and are on-hand for both pre-natal appointments and the labor itself.

UWM alumna Cara Kreuziger has a unique clientele for her doula practice.

She works for the Minnesota Prison Doula Project, a nonprofit effort to provide pregnant inmates access to a doula



Cara Kreuziger, a 2001 French graduate from UWM, is a doula with the Minnesota Prison Doula Project. Photo courtesy of Cara Kreuziger.

during their pregnancies.

"(Prisoners) don't have any support while they are giving birth. They can't have their family or friends with them. It's just the hospital staff and corrections officers in the room," Kreuziger explained. "Doulas help you process past experiences before you give birth that can hinder an easy birth. You can build up a lot of trauma that can make it hard to go in and relax and have a baby."

Kreuziger, a Milwaukee native, graduated from UWM with a French major, a subject she picked because her grandmother was a native speaker. After graduation, she earned a paralegal certificate from Milwaukee Area Technical College and worked in several courts as she and her family moved between Wisconsin and Minnesota for schooling and jobs.

She became a doula after the birth of her second child. Kreuziger hired doulas for each of her births and found herself becoming an advocate for pregnant women.

"I have prentatal appointments with my clients before their due date. I'm there for the entire birth. That could mean a day or

a few hours," Kreuziger said. "The point of a doula is that there is continuous care. There's no shift change; you're dedicated to this mother throughout her birth."

She volunteered as a doula with a local hospital and began taking private clients as well. Her business name, La Pleine Lune, harkens back to her UWM major. Then she found an opportunity to combine her interest in the legal system with her new profession by joining the Minnesota Prison Doula Project.

Founded by Erica Gerrity in 2010, the project matches incarcerated pregnant women with a doula who will provide parenting support over the course of the pregnancy. According to the project's website, about 6 to 10 percent of women are pregnant when they enter prison, and are at risk for numerous physical and mental health concerns. Many already have children and were the primary caregivers before their arrest. All will be separated from their infants shortly after delivery, and the children will be placed with a relative or in foster care until their mother's release.

The doulas working with the Minnesota Prison Doula Project can be a valuable resource for both prisoners and prison officials. In practical terms, said Kreuziger, she conducts parenting classes and teaches her clients how to care for their infants. She stays with them throughout their deliveries and provides much-needed emotional support when the women must return to prison without their newborns.

The results are undeniably positive.

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Video Stories



UWM was recently named a R1 research institution by the Carnegie Classification of Institutions of Higher Education, placing it among the top-tier research universities in the nation. Hear from our professors about some of our groundbreaking research - including from Physics Professor Patrick Brady, UWM Distinguished Professor Emeritus of Physics Leonard E. Parker, Distinguished Professor of History Merry Wiesner-Hanks, and Associate Professor of History Robert Smith. https://youtu.be/DjGLEWDO35Y



More than 3,000 students, including a large contingent from the College of Letters & Science, graduated in May. They celebrated by dancing (because sometimes you can't stop the feeling!) and received a shout-out from artist Justin Timberlake.<u>https://youtu.be/tFNU8ai1HNI</u>

Prison doula project

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"Right away, there was a drastic decrease in intervention rates. C-sections decreased – the number is super, super low. It was cut at least in half," Kreuziger said. "We could see right away that the officers were glad to have us there in the room. It was a lot less pressure on them."

In fact, in the first year the Minnesota Prison Doula Project was working with prisons, the C-section rate decreased from 63 to 3 percent. That, in turn, saved the prison system money since C-sections and subsequent care are more costly than vaginal births. No children were born premature, compared to 22 percent of births among uninsured women nationwide, and all were born at a healthy weight. Women reported being more confident in their parenting skills and formed stronger bonds with their infants, Kreuziger said.

She herself had one client who wrote an article for the prison's quarterly newsletter detailing her experiences with Kreuziger. The inmate was especially touched by how Kreuziger gave her a knit blanket to keep with her so that it would smell like her when she sent it home with her newborn after she returned to prison. (http://bit.ly/28UeUDV)

"It was nice to see that something like that touched her so deeply," Kreuziger said. "I think we're helping them see that they're not bad people; they just made a bad decision and there's hope."

To learn more about the Minneosta Prison Doula Project, visit www.mnprisondoulaproject.org.



Volunteering helped pave student's path to graduation

By Graham Kilmer, University Relations

After volunteering throughout her high school years, Philosophy major Britta Jerdee took a break when she first arrived at the University of Wisconsin-Milwaukee. Hopes of joining the Peace Corps and some personal soul-searching brought her back to it. This time around, she gained not only fulfillment from the work, but also started getting better grades en route to her May 2016 bachelor's degree.

What inspired you to start volunteering?

I started volunteering when I was in high school, and it was because I was bored. I was a pretty good student, and during my study halls, I didn't really have anything to do. So I would go to the special education office and help the students there with their homework and other things. Ever since then, I decided that I liked doing it.

Why did you take that break in volunteering?

My first couple semesters, I wanted to feel it out and figure out how much I could work into my schedule because I work part time. So I didn't think I was going to be able to add that to my schedule. In my fifth year, I had a pretty good grasp on how the process goes. I was able to work it in.

What got you back into it?

I just love doing it. I also have this aspiration. Somebody in passing mentioned the Peace Corps to me in high school, and it's a volunteering-based organization. In order to do that, you have to have a bunch of volunteer service, and I realized that I had kind of fallen off in my first few years of university. Lo and behold, I did much better in my classes, and I'm much happier.



Britta Jerdee graduated from the University of Wisconsin-Milwaukee in May, and she says volunteering made it not only a happier journey, but also one that featured better grades. (UWM Photo/Elora Hennessey)

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I learned that you have to work on various aspects of your well-being. I realized that I wasn't really working on my spiritual wellbeing, and that's usually what makes you the happiest. For me, it's helping people.

Where do you volunteer?

Next Door Milwaukee. It's an organization where I get to go read to preschoolers to help their literacy. We get them engaged in the books. They get to take a book home with them and start a library of their own. So it kind of promotes at-home learning as well.

I also started volunteering with Lake Valley Camp. It's for high school students. We take the kids to campus to kind of immerse them in the scene, and then we act as mentors for the kids. We teach them what campus life is about, what university is about and how to get into it. A lot of these kids are prospective first-generation college students, so we try to inspire them to seek higher education. Valley Camp is an actual camp out in Boscobel. They're involved in the program from 9 years old. So a lot of times, it's their first time going out in nature and experiencing working with the dirt. Horseback riding and canoeing and stuff.

How has it contributed to your experience at UWM?

Honestly, just the simple fact that I am happier. It helps me to engage, and it kind of is my getaway from school. I have that setaside time where I get the opportunity to make peoples' lives better, or at least make the contribution.

Do you have any advice for someone interested in volunteering?

Definitely go for it, even if it ends up not being your thing. That little sliver of an attempt to do so impacts somebody's life for the long run.





Lawrence Turner Collins ('73, PhD Botany) was quoted in USA *Today* regarding the thousands of plant species that are newly discovered each year. <u>http://usat.ly/28KTvtR</u>

Coleman Peiffer ('13, Master of Public Administration and Master of Urban Planning) was named the Wisconsin Economic Development Corporation's new business and investment attraction director, a position focused on attracting and growing businesses within the state. <u>http://bit.ly/28QvouG</u>

Appeals Court judge **Thomas Hruz** ('95, **BA Political Science**) has been named a finalist by Gov. Scott Walker to replace outgoing State Supreme Court judge Justice David Prosser, who will retire in July. <u>http://bit.ly/28PVM6D</u>

Gale Klappa ('72, BA Mass Communications), the outgoing CEO of WEC Engergy Group Inc., was named Best Energy Sector CEO by *Business Worldwide Magazine*. <u>http://prn.to/28U1V5a</u>

White House journey

Could you describe a typical day, or wasn't there one?

There is absolutely not a typical day in the White House. The first lady has a very small team and the amount of work that she does is incredible. Her team works very hard to make sure her initiatives are getting conveyed to the public.

Did you speak with the first lady frequently?

Well, my desk was right outside her working office, so I was able to see her at meetings frequently, as well as attend events that she would speak at. That was always the incredible thing, to see her go from preparing a speech in her office to actually delivering that speech in front of an audience.

What was your impression of her?

She's humble and full of enthusiasm. What you see in public is exactly the way she was in private. Being able to see her in her environment, I gained much more respect for her. To see her and how she redefined that role for herself has really inspired me.

Were you able to have your family and friends visit?



Sequoia Baker poses during her internship in the White House. Photo courtesy of Sequoia Baker.

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My little sister came down on the weekend of the Easter Egg Roll. She had an amazing time. They really rolled out the red carpet for her. Coming from where we come from, that was very important to bring her out there, to show her that this is not just something I can do, but something that virtually anyone can do if they're willing to work hard for it.

You came to UWM's Urban Teacher World program when you were in high school. How did you get involved in that?

I actually did the program two years in a row. I remember coming here the first year and being just amazed at being able to live in a dorm and be on a college campus. I'm sure all the facilitators of the program remember me as well because I was not nearly the person I am today. I was a little rough around the edges. That experience definitely challenged me and inspired me. Being a first-generation college student, when it came to applying for schools, I was virtually on my own, but one thing I knew for sure was that I was going to apply to UWM.

What advice do you have for others who come from challenging backgrounds?

I guess my main message is that it's possible. It's all possible. In Milwaukee, we definitely have a lot of room for growth in terms of opportunities for people from disadvantaged backgrounds. However, if you seek out the help, there are places like UWM and local government offices that are willing to help.

We salute outstanding faculty



UWM students recently named Biological Sciences professor Douglas Steeber as Undergraduate Research Mentor of the Year. Despite a busy schedule of teaching, research, and committee assignments, his students remain a priority.

"Dr. Steeber challenges his students to do better and is always available to help them," said student Navjit Lehal (right), pictured here with Steeber and fellow student Devan Leistikow.

Photo by Elora Hennessey, UWM.

Students of Color Advocacy senator Miela Fetaw holds in her highest regard Robert Smith, a History profesor and director of the Cultures & Communities Program at UWM.

"Open a dictionary and search the word 'spirited.' It is defined as full of energy, enthusiasm, and determination. Followed by the definition you will find a photo of Dr. Smith. this is the best word to describe the black brilliance and passion behind the man," she said.

Photo by Elora Hennessey, UWM.



Prairie dogs and plague

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She's in the process of sequencing the prairie dog DNA samples gathered by field researchers in Montana, Arizona, and Utah. When she's finished, she can begin analyzing the data to gain a better understanding of how prairie dogs – and their diseases – move around the landscape. That could help scientists find better ways to manage the populations.

"We have a plague vaccine for prairie dogs. If we look at gene flow and how individuals are moving in the landscape, we can improve management of prairie dogs and vaccinate them better to maybe overcome plague epidemics," Giglio said.

It's important because two endangered species are threatened by the disease's spread.

"The Utah prairie dog is endangered. They have really small populations and they're being wiped out (by plague)," Giglio said. "The second is the black-footed ferret. It's one of the most endangered species in North America. Their primary food source is prairie dog, so their food source is dying off – and they're also susceptible to plague."

Though it is minimal, there is a slight risk to people as well. Humans can contract Y. *pestis* if they come in contact with the blood of an infected animal, or if their pets pick up fleas from an infected rodent.

"It is pretty important from a health perspective to understand what the reservoir of the disease is – what species are maintaining the disease. If we really want to minimize the risk of plague, we have to understand it better, and one way of doing that is understanding where it's maintained most," Giglio said. "We can develop precautions, vaccines, and try eliminating it from the ecosystem we're looking at."



Rachael Giglio is studying prairie dog DNA to track the spread of plague in prairie dog colonies. Photo courtesy of Rachael Giglio.



In the Media and Around the Community

Millenial women don't think they should vote for Hillary Clinton based solely on her sex, according to Kathy Dolan (Political Science), who was quoted in a *Milwaukee Journal Sentinel* article outlining gender demographics in this election cycle. http://bit.ly/28ToDvQ

Training sea lions isn't easy but someone – like alumna Kelly Kamrath ('96, BS Biological Sciences) has to do it. Kamrath was featured in a *Lake Country Reporter* article regarding one of Milwaukee County Zoo's aging marine mammals. http://bit.ly/290e9sj

Cary Costello (Sociology and LGBT Studies) expressed his disappointment on WISN12 regarding Wisconsin's lawsuit agains the White House over federal guidelines about which bathroom transgender students may use at school. http://bit.ly/280QZEf

The efforts of Jessica McBride's (Journalism, Advertising, and Media Studies) journalism classes to find the missing photos of fallen Wisconsin Vietnam Veterans were lauded in a special Memorial Day issue by Conley Media newspapers. McBride and student Rachel Maidl (Journalism, Advertising, and Media Studies) also wrote about their experiences for the special section. <u>http://bit.ly/28QPR1J</u>

On May 25, Jeffrey Sommers (Global Studies and Africology) delivered the presentation "Against the Center: The United States 2016 Presidential Election" at the conference "Archaization and Traditionalization of Politics in the Modern World: Reasons, Perspectives, Alternatives" at Moscow State Pedagogical University.



Students in Jessica McBride's Investigative Reporting class stand with Andrew and Laura Johnson, who lead the efforts to find all missing photos of Wisconsin's fallen Vietnam Veterans.

Sommers also headed the news hour in Moscow with an interview on the U.S. Presidential Election. (http://bit.ly/28PIIyz) He was also quoted in a *Financial Times* article detailing Baltic economics. http://on.ft.com/28VFJs4

Joel Berkowitz (Jewish Studies) sat for a panel discussion titled "From God of Vengeance to Indecent" at the Museum of the City in New York. The panel included Pulitzer Prize-winning dramatist Paula Vogel, author of *Indecent*; director Rebecca Taichman, the play's co-creator; and Distinguished Professor Marvin Carlson (Program in Theatre, CUNY Graduate Center).



Marc Tasman presents at the Kern Conference on Visual Communication: Selfies, Self-Portraits, Social Media.

Marc Tasman (Journalism, Advertising, and Media Studies) was invited to speak at the 7th Kern Conference on Visual Communication: Selfies, Self-Portraits, Social Media, hosted by the Rochester Institute of Technology on April 14-16. He traced the lineage of the "selfie," conceptualizing it within performance and photography practices, to several daily photo projects, including his own in which he made a Polaroid self-portrait every day for 3,654 consecutive days—Ten Years and One Day—characterizing these works as protoselfies. http://bit.ly/28QrfGv

Gladys Mitchell-Walthour (Africology) presented "Racial and Gender Politics in Brazil" at the "Scandal in Real Time: A National Conference on Black Women, Politics, and Oral History" at the University of California Irvine.

The best parts of America are represented by water balloon tosses, said Liam Callanan (English) in a piece for *Milwaukee Magazine*. <u>http://bit.ly/28SW01a</u>

Robert Smith (History) coauthored a resolution proposing an initiative in Milwaukee

Public Schools that would create programming around the Black Lives Matter movement that would focus on racism, poverty, and inequality in education and policing, as detailed on KTVB. <u>http://bit.ly/285flB6</u>

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Andrew Kincaid (English). 2016. "Detecting Hope: Ken Bruen's Disenchanted P.I." in *The Contemporary Irish Detective* Novel (Crime Files) (Elizabeth Mannion, ed.), Palgrave Macmillan. <u>http://amzn.to/2811p12</u>

Shahd Al-Janabi, and Adam Greenberg (both Psychology). 2016. "Target–object integration, attention distribution, and object orientation interactively modulate object-based selection." *Attention, Perception, & Psychophysics*: 1-17. http://bit.ly/28TcJRU

Romina Palermo, Bruno Rossion, Gillian Rhodes, Renaud Laguesse, Tolga Tez, Bronwyn Hall, Andrea Albonico, Manuela Malaspina, Roberta Daini, Jessica Irons, **Shahd Al-Janabi** (**Psychology**), Libby C. Taylor, Davide Rivolta and Elinor McKone. 2016. "Do people have insight into their face recognition abilities?" *Quarterly Journal of Experimental Psychology*: 1-16. http://bit.ly/224dVUR

Gravitational waves

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The first black hole merger detected was unexpectedly massive, Creighton said. Until then, there was no information that proved that mergers could exist at so large a mass.

"The signal of the first one stood out from the noise much more than this one," he said. "This one is still a gold-plated event; it just required more sophistication to detect it in the data."

The detected signal comes from the last 55 orbits of the black holes, before their merger. Based on the arrival time of the signals – with the observatory in Livingston, La., measuring the waves 1.1 milliseconds before the observatory in Hanford, Wash. – the position of the source in the sky can be roughly determined.

Both discoveries were made possible by the enhanced capabilities of Advanced LIGO, a major upgrade that increases the sensitivity of the instruments compared to the first generation LIGO detectors, enabling a large increase in the volume of the universe probed.

Advanced LIGO's next data-taking run will begin this fall. By then, further improvements in detector sensitivity are expected to allow LIGO to reach as much as 1.5 to 2 times more of the volume of the universe. Another detector operated by the Virgo Collaboration is expected to join LIGO in the latter half of the upcoming observing run.

In the media



Nan Kim (History), was invited to speak at the Brookings Institution in Washington, D.C., where she introduced her book, *Memory, Reconciliation, and Reunions in South Korea: Crossing the Divide*, and participated in a panel discussion in June.

Physicists at UWM, led by **Patrick Brady** (**Physics**), talked with Wisconsin Public Radio about the significance of the discovery of a second set of colliding black holes detected by observing gravitational waves. <u>http://bit.ly/28ImH6h</u>

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Marc Levine (History) discussed racism in mortgage lending in Milwaukee with the BBC in June.

http://bbc.in/28LXPu5

LETTERS & SCIENCE

Jon Morales' (16, BA Communication) unique relationship with his mentor, Bob Wisniewski, was featured in the *Milwaukee Journal Sentinel* shortly after Morales graduated. Wisniewski also attended UWM. <u>http://bit.ly/28Q9CWL</u>