

# Annual Report 500 Women Scientists

## Table of Contents

Letter from Executive Director	3-4
A Year in Review	5
Event Highlights	6
Our Team	7
Our Programs and Initiatives	8-22
Changing the Face of Science	8-14
Building Collective Power	15-18
Holding Institutions Accountable	19-22
Media and Writing	22
Financial Standing	23-24
Funding Sources	23
Expenditures	24

### **Letter from The Executive Director**

Six years ago, in 2016, in the midst of a critical election in the United States, we made a pledge, along with nearly 20,000 women scientists and professionals from over 100 countries, to build a better world and a more inclusive scientific society, one that centers humanity and justice. Since then 500 Women Scientists has been working to change the face of science, so that we can not only normalize, but also celebrate and elevate people of all gender identities in the fields of science, technology, engineering, mathematics and medicine (STEMM). Over the years, as our understanding of oppression and justice has evolved, we have also continued to grow our efforts to hold institutions accountable and build collective power.

We have adapted the way we work, care, and live during this continuing global pandemic. Dismantling systemic inequities and structural barriers came to the forefront of our work. During this time, we leaned into what we do best and created new opportunities. In January 2021, we launched our rebranded gage platform, a resource for journalists, educators, policy makers and others around the world seeking the STEMM experts, especially self-identified women, gender non-conforming, non-binary, trans and gender diverse folks.

Our Fellowship for the Future program welcomed it's second cohort of fellows. We were so excited to welcome women of color from across the United States, with each fellow leading a unique community-based STEMM project.

Despite facing a daunting pandemic, our fellows have impressed us with their ingenuity, flexibility and passion to support their communities. For example, Rose Bear Don't Walk delivered COVID-19 care packages to Salish citizens in the Flathead Indian Reservation in Montana, in addition to launching an online resource on food plants for native and nonnative people. Jessica Tran worked on creating an interactive map of Northeastern Oklahoma impacted by lead and zinc contamination from a closed mine to educate and empower Native American tribes residing in the region to advocate for themselves. Lastly, Syrita Steib worked on a lab assistant program for currently and formerly incarcerated women in Louisiana that has since been launched in 2022.

The impacts of our programs like SciMom journey, Wikipedia edit-a-thons, and our policy work in addition to our nearly 536 pods across 92 countries, have amplified the voices of gender minorities in science and have worked to improve visibility to those unappreciated in STEMM. For example, through our Wikipedia Edit-A-Thons, our focus has been to improve, create, and translate Wikipedia biographies for women and gender minorities in STEMM. In the last four years, we've created and edited over three thousand pages, which have been viewed over 80 million times: 80 million opportunities to share the stories of those working in STEMM, and to slowly change the face of science.

In 2022, we have already gotten started with the recruitment of a new, talented, and passionate international volunteer leadership team, the hiring of a new permanent fellowship director and manager for fellowship for the future program, key media pieces that have gained national press coverage. and launched several new initiatives, including a DEIJ educational program for pods and organizational leadership. and our Fix the Gap honoraria database. We have even received awards to recognize our efforts, from community service to advocating for equity.

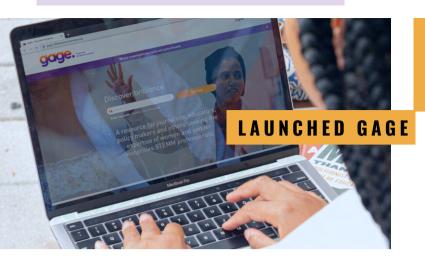
There is still so much work to be done. With the upcoming launch of the Black Women's Collective, our continued enhancements to Gage, and the unfortunate threats of continued oppression to the most vulnerable and historically marginalized communities, 500 Women Scientists will continue to fight for justice and build our collective power as we grow and learn more.



Emily Pinckney, Executive Director— 500 Women Scientists



## **Our Year in Review**



We featured over **100** women and gender diverse folks through our various events, programs, partnerships and campaigns.\*

A free, open access search platform featuring almost **15,000** women and gender diverse folks in STEMM



We grew our team hiring our 4 full time staff members including Interim Executive Director followed by a full-time ED, Director of Outreach, Director of Communications and Pods Manager.



We launched our second cohort of Fellowship for the Future—a leadership award program for women of color in STEMM



<sup>\*</sup> Lifeology features, Social media interviews, Twitter takeovers, Wiki biographies, events, etc

## **Event Highlights**



In February 2021, 500 Women Scientists partnered with Science Friday to host the Breakthrough Festival: a week-long festival to amplify the voices of women scientists. This science educational event series was open to attendees of all ages, and included interactive online activities, including an art day for kids, DEI focused interviews and workshops, a watch party to view the Perseverance Mars Landing, a community collaboration day and more! Watch the livestream recordings here.



In honor of Ada Lovelace Day (Oct 9th), we hosted <u>Hidden Figures: Celebrating Diversity & Technology:</u> an event including a watch party of the <u>critically acclaimed documentary—Coded Bias</u>, followed by an interactive workshop on facial recognition and a Wikipedia Edit-A-Thon to highlight the work of marginalized communities in computing and technology.



In November 2021, we hosted a two-day career empowerment workshop series in partnership with Thermo Fisher Scientific to empower academic scientists with career exploration skills and expand their understanding of career paths in the biotech and pharmaceutical industry.

## Our Team

## VOLUNTEER LEADERSHIP TEAM

Chinmayi Balusu Rebecca Barnes\* Francesca Bernardi Stefanie Bodison\* Wendy Bohon\* Ana Carvalho Rosie Dutt Lauren Edwards\* Kelly Fleming Gabriela Fernández-Cuervo Gretchen Goldman Caity Haines Ugbaad Kosar Charlotte Levy Monica Malta Alison Marklein Liz McCullagh\* Amanda Obidike Farah Oaiser\* Teal Potter Emily Pinckney **Juniper Simonis** Catherine Wagner Anila Yadavalli

#### **ADVISORY BOARD**

Jill Blackford\*
Susan Cheng\*
Melissa Creary
Rachel Gallery
Laura Helmuth
Aaron Huertas
Justin Lindenberg
Jessica Metcalf
Christine O'Connell
Joshua Wolfe

#### **STAFF**

Kara Bocher Lauren Edwards Anushka Gole Cicely Paine Emily Pinckney Anne Marshall Nicole Williams

#### **CO-FOUNDERS**

Kelly Ramirez\* and Jane Zelikova\*



\*Executive Leadership Team

Maryam Zaringhalam\*

## Programs & Initiatves

## CHANGING THE FACE OF SCIENCE



gage—Discover Brilliance Sci Mom Journeys Wikipedia Edit-A-Thons

Fellowship For the Future

## gage discover brilliance



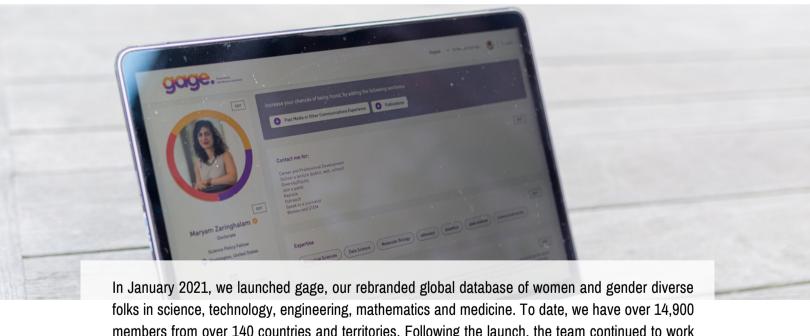
Launched rebranded database with improved search functionality and user experience.



Created gage video and launched multichannel marketing & outreach efforts.



Organized a photoshoot in Washington, DC to feature gage members across STEMM fields.



folks in science, technology, engineering, mathematics and medicine. To date, we have over 14,900 members from over 140 countries and territories. Following the launch, the team continued to work on enhancing the platform through improving user experience, search functionality, communication and security features, while continuing to prioritize the inclusion and safety of our members. We increased efforts to promote the platform and highlight our members through multi-channel efforts, including a video, gage Twitter takeovers, IG Live interviews, and an illustrated educational deck in partnership with Lifeology. We also organized a photoshoot enabling some of our members in Washington, DC to have high-quality images for their professional needs. We also assessed the impact of gage, and published our findings in the open-access FACETS journals.



Illustration by Sara Lynn Cramb

## **Sci-Mom Journeys**

The pandemic has posed a substantial challenge to all parents, with childcare center closures and pervasive illness, fear and uncertainty about the long-term health consequences of COVID. Furthermore, vaccination for children remained unavailable for much of 2021, and vaccines for those under 5 years of age are still not approved for emergency use. This has meant that parents have faced major COVID surges with great concern for the health and safety of their children. We remain concerned about the disproportionate impacts that these issues have placed on scientist mothers. We have been an active voice in advocating for science-based decision-making regarding COVID since the beginning of the pandemic.

In 2021, we remained active in advocating for protections for those who remain particularly vulnerable in our society. We published a piece in Scientific American at the start of the Delta variant surge in August 2021, where we urged schools and universities to uphold mask mandates and require vaccination for all who were eligible. We followed this with another piece at the beginning of the Omicron variant surge to emphasize the agonizing decisions that parents were still facing and the detrimental career impacts of the situation, and recommended concrete steps that those in leadership positions can take to address the ensuing disparities in research productivity and career progress. We will continue our efforts to further strengthen advocacy in these areas.

Furthermore, we remain active in advocating for progress and positive change in other areas related to successfully navigating the challenges of building and maintaining a scientific career on the journey to and through parenthood.

## **Wikipedia Edit-a-thons**

In 2021, 500 Women Scientists hosted ten Wikipedia Edit-a-thons, partnering with a range of scientific societies and institutions to increase representation for women and non-binary leaders in STEMM, as well as for researchers who are also members of the LGBTQ+ community and the disability community. Our partners included the <a href="Harvard Microbial Sciences Initiative">Harvard Microbial Sciences Initiative</a>, <a href="Materials Science & Technology 2021 Meeting">Materials Science & Technology 2021 Meeting</a> organizers, <a href="Johns Hopkins Disability Health Research Center">Johns Hopkins Disability Health Research Center</a>, and the <a href="American Society for Engineering Education">American Society for Engineering Education</a>.

We also hosted Edit-a-thons as part of major 500 Women Scientists' campaigns, including the Breakthrough Festival, hosted with Science Friday, and the Hidden Figures: Celebrating Diversity in Computing and Tech campaign. Collectively, these Edit-a-thons have brought together 150 editors to create 87 pages and improved the quality of 369 pages, all of which have since been viewed 1.2 million times. Researchers from the University of Pennsylvania have since studied the <a href="impact of our Edit-a-thon program">impact of our Edit-a-thon program</a>, publishing their results in the Journal of Communication in February 2022.

**10** 

**150** 

**456** 

**1.2** mil

Edit-athons

editors

pages created & edited views of Wiki pages

#### YOU CAN CHANGE THE FACE OF SCIENCE



To support the sustainability of our Edit-a-thons and train Wikipedia experts to lead Edit-a-thons across our network of Pods, we have continued our partnership with <u>Wiki Education</u>, taking two cohorts of 35 total editors on a deep dive through Wikipedia. Participants in the course created 24 articles, improved over 100 articles, and have since served as volunteers to support our Edit-a-thon programs. Several participants have shared their experiences participating in the program on <u>Wiki Education's blog</u>.

## **Fellowship for the Future**











Fellowship for the Future Cohort 2. Left to right: Janina M. Jeff, Kendra Krueger, Jessica Tran, Syrita Steib and Sara Gutierrez.

Building on the success of 2020, we continued growing <u>Fellowship for the Future — a two year leadership award program</u> that supports women of color who are leading community-based STEMM projects. In 2021, we recruited and <u>launched our second cohort of fellows</u>, while also deepening the scope of our program including providing our Fellows with a one-time honorarium of \$7,500, supplementary project funding of \$1250, quarterly skills development workshops (communications, social media, project management, etc.) and access to a wide range of resources and networking opportunities. Read on to learn more about a few of our fellows projects.

Rose Bear Don't Walk (She/her)
Ethnobotanist and rotating host of SciShow



**Project Details:** My fellowship project is Recover our Roots: Salish Ethnobotany for Community Wellbeing and it allows me to use the science of ethnobotany to make a positive change on my home Salish tribal community. During the pandemic, I launched the <u>Salish Plant Society</u> which is an online resource available for native and non-native peoples to highlight the traditional <u>ecological knowledge of the Salish people</u> and how we can have positive healthy relationships with food plants.

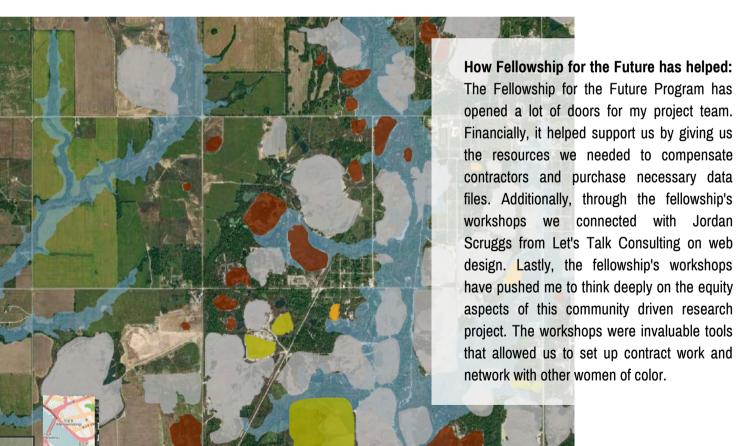
How Fellowship for the Future has helped: The fellowship funds allowed me to publish my website as well as pay a local native artist to design our logo. Additionally, the funds helped me purchase a camera that I otherwise could not afford on my own and that has helped me create content for the website as well as informational blogs and resources I create. I was able to use some funds to create Covid care packages for elders and other community members featuring traditional food plants and medicines. In total, I created and delivered 37 care packages to Salish citizens on the Flathead Indian Reservation in Montana. The fellowship has also opened me to a new world of STEM and opportunities to connect, learn and share with Women of Color in science which is both inspiring and enriching.

#### Jessica Tran (She/her)

PhD Candidate, Environmental Social Sciences (University of Minnesota), Yale Environmental Fellow, American Geophysical Union Thriving Earth Exchange Community Science Fellow



Project Details: My project team is working to map the impacts of the Tar Creek Superfund Site in northeastern Oklahoma. Designated in 1983 after the closure of the world's largest lead and zinc mine, 74 million tons of lead-contaminated tailings piles, also known as "chat", were left dispersed across the landscape. This contamination has affected the lands of nine federally recognized Native American tribes and the county's 31,000 residents. Through mapping the Superfund Site with data layers that include future predicted climate change impacts (like flooding), it will allow residents to better understand the future of their community, advocate for stronger remediation efforts, and plan to adapt to climate change. I'm really proud of the map we created and the stakeholders we've been able to engage with thus far. The map has 18 data layers which includes mining waste, flood plains, tribal boundaries and more.



Screenshot of Interactive Map of Tar Creek Super Fund Site

#### Syrita Steib (She/her)

Executive Director and founder of Operation Restoration; nationally certified and licensed Clinical Laboratory Scientist in the state of Louisiana.



Project Details: The Lab Assistant Program prepares currently and formerly incarcerated women to work in a laboratory healthcare setting and obtain training and employment, in partnership with Louisiana Correctional Institute for Women (LCIW), Delgado Community College and the Louisiana Department of Public Safety and Corrections. This program meets the immediate needs for qualified lab personnel that have been intensified due to the global pandemic. The program provides stable, high-quality employment opportunities for incarcerated women after release. The Lab Assistant profession gives women an opportunity for upward mobility in laboratory professions

**How Fellowship for the Future has helped:** The fellowship program has supported by covering some of the student costs — transportation, uniforms, and food.



## **Programs & Initiatves**

## **BUILDING COLLECTIVE POWER**



Pods/Local Chapters
Partnerships



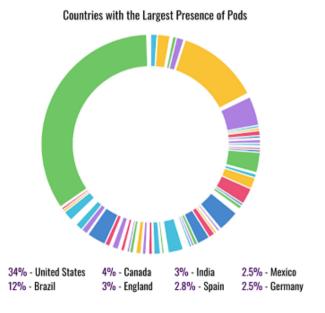
From one woman in science to another, how can we help each other? Communicate with intention and compassion, sharpen our sensitivities to differences and the diversity around us, be aware of barriers and break them when possible and build opportunities for one another. — Rakenduvadhana Srinivasan, Helsinki Pod Coordinator



Through our global network of Pods, we aim to:

- Elevate the voices of women, particularly Black, Indigenous and Women of Color, as role models at all career stages.
- Shift perceptions of what it means to do science and lead.
- Make it easy to find women and gender minority experts.
- Provide DEIJ education and the tools to fight racism, patriarchy, and oppressive societal norms to enable members to fundamentally change their scientific institutions.

Our Pods network continues to increase its global reach as these science ambassadors convene and drive change in their local communities. 2021 saw a slower growth rate of pods, compared to previous years; however, the growth patterns indicated that 500WS is reaching new areas that were previously without any local chapters. Forty new pods were started across the globe, bringing our total Pods to 536. Sixty percent of these new pods were started outside of the United States. Twenty pods were reactivated with new coordinators, ushering in a new era of leadership!



Pods have continued to navigate the virtual and hybrid landscapes necessitated by the pandemic, injecting creativity and ingenuity into the many ways they were active as advocates, activists, teachers, researchers, mentors and more. Pods have hosted local science communication events including webinars, research presentations and trivia nights, participated in book clubs and virtual film screenings, wrote blogs and op-eds, and engaged their local policy makers to advocate for changes through postcard campaigns. Additionally, pods have attended science festivals, conferences and university events to advocate for equity, access and inclusion for women and gender minorities in STEMM. Over 130 activities were logged by Pods for 2021, but we estimate this number to be closer to 400 global outreach and in-pod activities. Below are a few highlights.



500WS Boulder (Colorado, USA) has an ongoing collaboration with 30 local schools where pod members mentor K-12 students about science and careers.

Activism

500WS San Diego
(California, USA) wrote
postcards to representatives
and senators urging them to
support the Women's Health
Protection Act.

500WS Panama City (Panama) facilitated 10 free virtual events workshops on topics including COVID-19, financial education digital

financial education, digital communication and more.

Writing

500WS São Paulo (Brazil)
Published "Scientific sexism:
the gender bias in the scientific
production of the University of
São Paulo" in the Journal of
Public Health of the University
of São Paulo.

500WS Bern (Switzerland) organized Women in Science Flashmob featuring science talks by women scientists to normalize and increase the visibility of women experts.

**Social Networking** 

500WS Ponta Grossa (Brazil) hosted a book club discussion on how the demonization of "gossip" is used to break women's solidarity based on Silvia Federici's studies.



Our <u>partnerships</u> have been instrumental in continuing to reach a broader audience and amplifying the work of other mission-aligned organizations. In 2021, we partnered with various organizations, including Thermo Fisher Scientific, Science Friday, NARAL pro-choice America, and Lifeology, and wrote letters of support for NSF grants submitted by <u>ADVANCEGeo</u> and <u>Star Goddesses</u>.

We have continued our partnership with <u>Lifeology</u> to highlight women in Science, Technology, Engineering, Mathematics, and Medicine (STEMM) who inspire us. The <u>illustrated educational deck</u> spotlights members of our gage search platform, further demonstrating its power to discover women and gender diverse experts in STEMM fields.

To kick off 2021, we collaborated with Science Friday to host a week-long celebration amplifying the voices of women scientists. This virtual festival was a science learning event series for all ages featuring interactive activities and conversations highlighting equity and women in STEMM. Topics included a kids paleo art day, diversity in technology, killer snails, inclusive action toolkit workshop, and ended with a Wikipedia Edit-a-Thon (16 editors, 39 articles edited) to expand the representation of women in STEMM. You can rewatch the live streams here from the entire festival.

500 Women Scientists could not remain silent as Americans' reproductive freedom was under attack. Through our partnership with <u>NARAL Pro-Choice America</u>, we have released an <u>open letter</u> that calls out scientific disinformation and communicates how the lack of access to informed reproductive care negatively affects public health, our families, and our lives.

In early November, 500 Women Scientists partnered with <u>Thermo Fisher Scientific</u> and <u>LinkedIn</u> to offer a two-day event to empower academic scientists to expand their understanding of career paths in industry.

500 Women Scientists continues to secure new partnerships in 2022, including <u>Science Rising</u>, <u>Ladies Get Paid</u>, and <u>NASA's Transforming to Open Science (TOPS) program</u>.











## Programs & Initiatves

## HOLDING INSTITUTIONS ACCOUNTABLE



**Policy Initiatives** 

Fix the Gap

Media and Writing



## **Policy Initiaves**

This year, we leveraged the victories of 2020 to support women and non-binary leaders in the space of science policy. We worked with the Journal of Science Policy and Governance to provide training to our members on writing policy memos on hard-hitting topics in science and policy. In coalition with the journal, National Society of Black Engineers, and Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) we sponsored a Special Issue on Intersectional Science Policy. We further supported women in the science policy workforce by sponsoring a webinar with the Coalition for Women's Appointments. This organization trains women on how to self-nominate for federal presidential appointments. We also want to extend our sincerest congratulations to our very own former leadership team member Gretchen Goldman, who left 500 Women Scientists to join the Office of Science and Technology Policy.

We also spoke out against scientific misinformation, collaborating with NARAL to draft a <u>sign-on letter</u> speaking out against scientific misinformation in reproductive health. In 2022, we also look forward to launching the third iteration of our voter engagement initiative. We will be leveraging our successful collaboration with Vote Forward, under the direction of a new team of science policy leaders.







To change the culture of science and close the pay equity gap, we must change institutional norms and make it easy to seek and pay all scientists what they're worth. Women make 83 cents to the dollar a man makes and that gap increases for Black, Latinx, and Native women.

— Jane Zelikova, Lauren Edwards, Wendy Bohon & Maryam Zaringhalam in Shondaland (2021)

In January 2021, 500 Women Scientists' co-founder, <u>Dr. Jane Zelikova</u>, sent out <u>a tweet</u>, asking if there was a public database listing a range for honoraria and fees received for speaking engagements. The idea was that it should be easy to ensure scientists, especially women, are being paid fairly for their time and effort.

Unfortunately, no such database existed. But the responses made it immediately clear that there was a need to help normalize compensation for STEMM expertise, and make it easy for anyone, especially those from historically excluded communities, to point to a resource to justify their "ask".

And so, in spring 2021, Fix The Gap was born: an effort led by 500 Women Scientists to chip away at the pay equity gap, starting with speaking engagements. We launched a survey to crowd-source speaking fees and honoraria from across STEMM disciplines, career stages and geographies. We received responses from over 700 STEMM professionals and compiled over 1,000 honoraria. We are deeply thankful for the time and energy everyone took to thoughtfully share their experiences.

Among the responses, we noticed several themes, including respondents expressing that:

- They had not thought about receiving honoraria for speaking engagements before;
- It is difficult to navigate financial compensation; and

PAYEQUAL

 A cultural change is necessary to better value researchers' time and efforts, especially for researchers belonging to historically excluded communities.

In the remainder of 2021, we reviewed survey responses and prepared resources, including an <u>open-access</u> <u>honoraria database</u> (which has since been launched in April 2022). We look forward to distributing these resources widely in 2022 to start tackling the pay equity gap.



Since its inception, 500 Women Scientists has continued to lend its collective expertise and voice to bring continued attention to some of the most urgent issues facing our society. 2021 was no exception with our leadership members authoring pieces relating to gender and racial inequity, COVID-19, and more. In January 2021, we warned (or, as we now know, foreshadowed) that <a href="Eric Lander was not an ideal choice for US">Eric Lander was not an ideal choice for US</a>
Presidential Science Advisor particularly given the supremely qualified list of women of color candidates for the position. We also published an in-depth piece in Shondaland on how <a href="www.women.and.women.of.color.scientists.are">women.of.color.scientists.are</a>
building collective power.



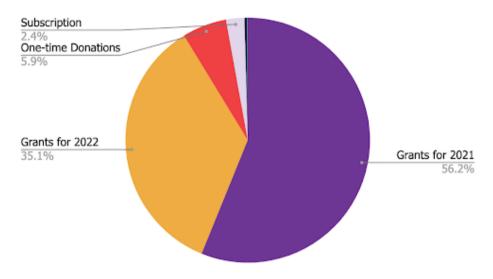
Globally, women scientists are leading efforts to fundamentally transform science...Our collective power comes from merging our scientific expertise and our lived experiences to solve urgent global problems that only science can solve. And sometimes, our power comes from simply coming together, celebrating each other's wins, and supporting each other through losses. Joy and friendship are the fuel for our science and activism.

With the unrelenting impact of COVID-19 across the world, our SciMom Journeys team have continued to advocate for better accommodations for caregivers, particularly in American academic institutions. Some of our members co-authored a piece with Geo Latinas to call on the scientific publishing community to do better and become more socially just. Check out more pieces we published, including this fun list of children's science books, as well as this powerful piece on hair discrimination and being African American in STEMM.

## Financial Standing

We are thankful for the support of over 1,350 individual donors, as well as from foundations and corporate donors. In 2021, we raised over \$400,000, which makes it possible for us to grow our programs and launch new initiatives. These funds have also enabled us to take a large step as an organization to finally hire dedicated staff, including our Executive Director Emily Pinckney, Director of Communications Anushka Gole, Director of Outreach Nicole Williams, and Pod Coordinator Kara Bocher. Over the last year, we have received \$41,804 from one-time donations and \$17,311 from our subscription program.

We formed a new relationship with the <u>Chan Zuckerberg Initiative</u> who will be funding more of our Pod's activities and Diversity, Equity, Justice, and Inclusion work. We continued to receive funding from <u>Science Sandbox</u>, an initiative of the Simons Foundation, and <u>If/Then</u>, an initiative of the Lyda Hill Philanthropies to support our Gage directory. We have also received grant funding to support our Fellowship for the Future through Science Sandbox and the New England Biolabs Social Justice Philanthropy, which enabled us to hire a part-time Director and Manager for the program.



FUNDING SOURCES IN 2021		
Grants (allocated 2021)	\$ 400,000.00	
Grants (allocated 2022)	\$ 250,000.00	
One-time Donations	\$ 41,804.00	
Subscription	\$ 17,311.00	
Pod Contributions	\$ 2,500.00	
Corporate Contributions	\$ 597.00	
Total Fundraising Income	\$ 712,212.00	

## PROGRAM FUNDS 2022

PROGRAM FUNDS GOING INTO 2022		
Diversity, Equity, Justice and Inclusion	\$ 100,000.00	
Fellowship for the Future	\$ 25,000.00	
Operations	\$ 100,000.00	
Pods	\$ 2 5,000.00	
Total Funds Raised	\$250,000.00	

## **EXPENDITURES**

	EXPENSES IN 2021	
Programs	Gage (Request a Woman in STEMM	\$ 250,000.00
	Fellowship for the Future	\$ 34,000.00
	Pods	\$ 49, 569.00
Organizational	Leadership Meetings	\$ 9,666.00
	Organizational Development	\$ 9,613.00
	Advertising, Marketing & Communications	\$ 92,346.00
	Supplies & Subscriptions	\$ 3,902.00
	Accounting & Legal	\$. 7,280.00
	Bank Charges & Fees	\$ 3,083.00
	Professional Fees	\$ 2,250.00
	Insurance & Organizational Fees	\$. 2,039.00
	Total 2021 Expenses	\$ 463,748.00



## Stay in touch

500womenscientists.org info@500womenscientists.org

Y

@500womensci



@500womensci

