

Final Report - Cambridge Arts Council

Introduction

Black, Latinx, Asian and Pacific Islander, Indigenous, and people of color (POC) lack representation in many settings as compared to the percentage of the population they represent. For example, there is a profound lack of diversity in publishing. Photography and mainstream media are bereft of or provide extreme misrepresentations of POC. And the racial/ethnic disparities we see across the sciences are stark. The goal of The Poetry of Science is to advance racial and social justice, in part, by addressing these disparities and celebrating the fortitude of POC through the intersection of the arts and sciences.

With the Cambridge Arts Council Art for Racial Justice Grant, The Poetry of Science amplified the voices and visual presentation of artists, poets, and scientists that often go unseen. Utilizing poetry and photography to validate the realities of POC, we countered the negative associations handed down by systemic racism by forming new and positive links between POC, the arts, and the sciences. This project paired local poets of color with local scientists of color to create poetry based on scientists' work, motivations, and history. Scientists' portraits, created in collaboration with a local fine art photographer, have been exhibited with associated poetry at the Massachusetts General Hospital (MGH), the Massachusetts Institute of Technology (MIT), with future venues currently in preparation. Our poets have also presented their work at the Boston Book Festival and published their poetry in Spry Literary Journal.

We achieved the goals of our socially engaged art project—which included 26 individuals across three institutions—by leveraging media outlets, digital media, and Spry Literary Journal to broadcast our artwork to hundreds of thousands of people. Our participants include a former Boston Poet laureate, established and emerging writers, a roboticist, neuroscientists, and other researchers from institutions like MGH, MIT, Boston University (BU), and Harvard University. Indeed, The Poetry of Science exceeded initial expectations of creating a new language that bridges the gap between the sciences and the humanities to connect communities of color and build coalitions across distinct disciplines.

Project Structure and Timeline

The Poetry of Science was directed and managed by a two-person team working with 24 scientists, poets, and artists across three institutions (i.e., MIT, MGH, and The Peoples' heART). Following strict schedules was paramount during our project to produce the artwork

successfully, learn about the unique interactions between poets and scientists, exhibit our photography and poetry, and reach our overall project goals.

Project Team, Participants, and Timeline

The core team of the Poetry of Science includes Joshua Sariñana, PhD, director of The Poetry of Science, and Linsey Jayne, MFA, project manager. Joshua is an MIT-trained Mexican-American neuroscientist, fine art photographer, and writer. He has exhibited his work nationally and internationally. Joshua has also received the Council for the Arts Grant at MIT and a Somerville Arts Council Project Grant.

Linsey is a third-generation Lebanese American poet and writer and is the co-founding editor-in-chief of Spry Literary Journal. Spry is a biannual journal that publishes short, tight, potent forms of writing—poetry, flash, short stories—and art, photography, craft essays, and interviews.

The Poetry of Science collaborated with The Peoples' heART (Health Equity x Art). This group creates space within health care settings to reflect the community and staff that promotes patient inclusion and representation, with the ultimate goal to enhance treatment outcomes. The Peoples' heART acquired portraits and poems for their permanent collection to exhibit in healthcare settings throughout the Boston area. In addition, The Peoples' heART lent the framed prints and poetry to The Poetry of Science to display at MGH and MIT. Daniel Chonde, MD, PhD, executive director of The Peoples' heART, participated in The Poetry of Science. We worked with their artistic director, Meg Carleton, LMHC, and affiliated installation artist, Diya Ghosh to hang the exhibitions.

The Poetry of Science paid Jean-Dany Joachim and Vanessa Leroy to select poets for the project and create the scientists' portraits, respectively. Jean-Dany's and Vanessa's work speaks to social justice, race, and equity.

Below is a list of poets and scientists participating in The Poetry of Science and a timeline of key milestones.

Participating Poets:

Charles Coe is an author and former artist-in-residence for the city of Boston. He is an
adjunct professor of English at Salve Regina University and Bay Path University, where he
teaches in both MFA programs

- Danielle Legros Georges, writer, literary translator, and second Poet Laureate of the city
 of Boston. She is also a professor of creative writing at Lesley University
- **Miriam Manglani** is a published poet and MFA candidate with Writers Village University who works full time as a technical training manager at Sonos
- **Suparnamaaya (Maaya) Prasad**, an undergraduate junior at MIT majoring in Electrical Engineering and Creative Writing
- Luisa Fernanda Apolaya Torres is a poet who studied mechanical engineering and theater at MIT
- **Rachel Wahlert** is a resident of Dorchester and supports low-income undergraduate students to get them to graduation and find employment
- Honorable Mention: Sophie Laurence, a multilingual poet and first-year student at Amherst College majoring in computer science and political science

Participating Scientists (see appended gallery images and associated poetry quotes):

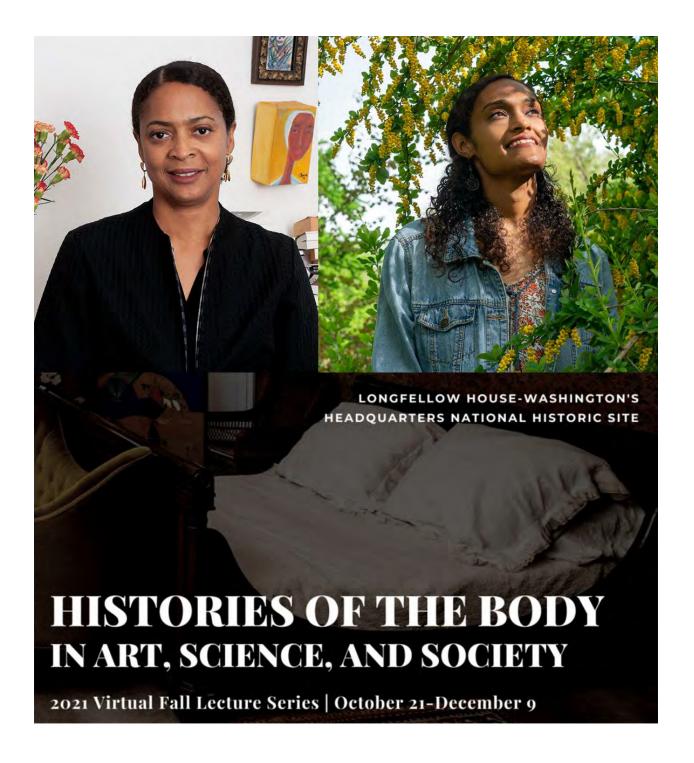
- Daniel Burje Chonde, MD, PhD, resident in radiology at Massachusetts General Hospital, executive director of the Peoples' heART
- Sheena Vasquez, PhD candidate in the Department of Biology at MIT
- Michael Wells, PhD, associate professor, Department of Human Genetics at UCLA (formerly at the Broad Institute)
- Huili Chen, MS, PhD candidate at the MIT Media Lab
- Olumakinde (Makinde) Ogunnaike, MSc, PhD candidate in the Department of Physics at MIT
- Nandita Menon, MS, a technical associate at MIT
- Kareem Carr, PhD candidate in the Department of Biostatistics at Harvard University
- Kathleen Esfahany, computational neuroscience and artificial intelligence researcher at MIT
- Christian Loyo, PhD candidate in the Department of Biology at MIT
- Jason Samaroo, PhD candidate in the Department of Biology at Boston University
- Shannon Johnson, PhD candidate at the MIT Media Lab
- José Zepeda, PhD candidate in neuropharmacology at the Vanderbilt University School of Medicine
- Swati Gupta, PhD, neuroscientist and postdoctoral fellow at the Icahn School of Medicine at Mount Sinai

Key Milestones

We set specific goals for participants before project launch, given the sheer number of poets, scientists, collaborations, and the general complexity of the project's aims required. Joshua and

Linsey created a timeline for poets and scientists to collaborate, which helped guarantee the timely production of poetry and photography for readings and exhibitions. Below are essential timepoints across the entirety of the project.

- February 28 to April 4 Email and social media campaign for poetry call-for-entry
- March 29 to May 1 Email and social media campaign for scientists call-for-entry
- April 30 Selected poets contacted, congratulating them on their acceptance to The Poetry of Science
- May 3 Selected scientists contacted, congratulating them on their acceptance to The Poetry of Science
- May 4 to 8 Poets and scientists receive collaborative pairings and have met as triads with The Poetry of Science team
- May 16 to 30 Scientists have their portraits taken at the Arnold Arboretum
- June 5 Poets and scientists have finished the collaborative phase of the project; Poets meet with The Poetry of Science team to discuss the upcoming performance at the Boston Lit Crawl
- June 10 Poets perform their drafts at Boston Lit Crawl
- **July 6 to August 4** Qualitative interview between poets and scientists to learn about their collaborative process and identify unique themes between the humanities and the sciences
- **July 13** Invitation to exhibit at pop-up gallery space at 650 East Kendall St. Cambridge focusing on BIPOC, Queer and Disabilities artists
 - August 27 Pop-up gallery exhibition canceled due to updated agreement as a result of COVID-19 Delta variant
- July 21 The Poetry of Science accepted to Boston Book Festival Unbound
 - September 14 Due to COVID-19 Delta variant restrictions, we were no longer able to participate, given a new date, time, and venue
- August 9 The Poetry of Science online digital gallery page is published live
- August 11 Poems finalized and edited for online publication
- August 12 The Poetry of Science poetry page is published live
- **September 26 November 13** Portraits and poetry exhibited at Mass General Cancer Center
- November 12 Danielle Legros Georges and Sheena Vasquez <u>present at Longfellow</u> <u>House</u>-Washington's Headquarters National Historic Site (see flyer below)



- November 13 30 Portraits and poetry were shown in the Mass General lobby (see Appendix I for images of all exhibitions)
- November 15 Spry Literary Journal publishes Poetry of Science issue
- December 3 WGBH's Boston Public Radio interview the director of The Poetry of Science and participating scientists, Makinde Ogunnaike

- December 6 to January 28 Portraits and poetry exhibited at MIT Rotch Library gallery space
 - Dec 22 Due to the COVID-19 Omicron variant, MIT has closed library access and asked for us to extend the show to the end of their spring semester

Project Structure and Timeline Summary

The Poetry of Science is a multi-disciplinary and multi-media project that brought together several communities via digital and in-person interactions. We were prosperous by diligently planning and ensuring clear, consistent, and balanced communications with our participants (and various audiences) during the project's duration. We were concerned about hitting the targets above during the height of the COVID-19 pandemic and its ebbs and flows. Nonetheless, we persisted and felt that our two-person team, the professionalism of our participants, and collaborating partners (i.e., The Peoples heART, MGH, and MIT) were instrumental to our success.

Exhibitions and Poetry

We have focused on bringing the exhibition and poetry to several sites to reach multiple audiences. These venues include in-person and digital spaces, which allowed us to "bring art to where you are" to get to diverse communities that otherwise might miss out on a single exhibition site.

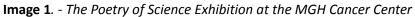
We held one poetry reading, one lecture, three exhibitions, and one live radio interview concerning our live events. In addition, we were invited to exhibit at a pop-up gallery in Cambridge, present our project, and give an additional reading at the Boston Book Festival Unbound series. Unfortunately, due to the COVID-19 Delta variant, we could no longer be part of those two events.

Described below are exhibitions, events, and publications that The Poetry of Science participated in.

Exhibitions (See Appendix I for detailed installations):

Massachusetts General Hospital – The Cancer Center at MGH (see Image 1.) and the MGH main lobby (see Image 2. Note: not all pieces are shown in photo) hosted The Poetry of Science exhibition. We chose these venues for two reasons: (1) to maximize the total number of in-person audience members who would view our poems and portraits; and (2) <u>nearly 30% of MGH patients</u> are either Black or Latinx, which allowed us to bring The Poetry of Science to our

target audiences and increase awareness of scientists and poets of color to the larger BIPOC community. These exhibitions ran from September 28 through November 30.



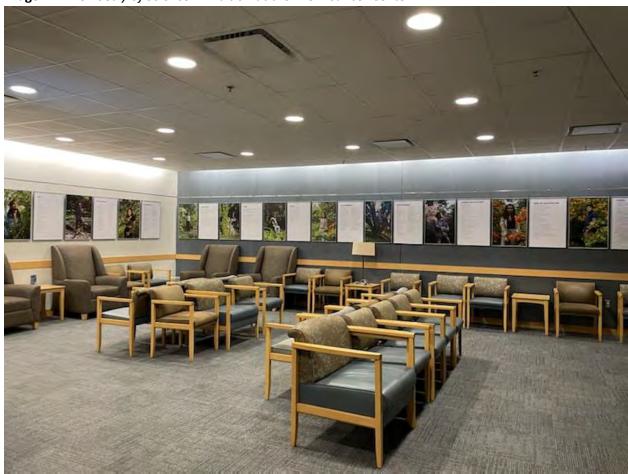


Image 2. - The Poetry of Science Exhibition at the MGH Central Lobby



Massachusetts Institute of Technology — MIT's Rotch Library Gallery space uniquely showcased our scientists and poetry (see Image 3. Note: Shown are only 6 of 22 pieces in the exhibition). Black and Latinx students are underrepresented in higher education compared to the U.S. and Massachusetts populations. For example, over the past three years, MIT has only awarded 10 PhDs to Black students, 80 to Hispanic or Latino students, and just two to American Indian or Alaskan Native students (compared to 555 white students). The Poetry of Science powerfully communicates the representation of scientists of color and celebrates their work and personal identities by consolidating their voices into this space. Additionally, many of the scientists shown in this series are MIT graduate students, which brings attention to the BIPOC community at the institution. This exhibition runs from December 6 through January 28. Due to the Omicron variant, we were asked to extend our show through the spring as the libraries close during January.





Central Square Theater – The theater invited The Poetry of Science to exhibit in their main lobby during their production, *Young Nerds of Color*. This play focuses on the stories of underrepresented scientists. It is a community-driven collaboration that parallels the goals of The Poetry of Science (i.e., to give voice to scientists of color and translate their experiences through art). Exhibiting our project with *Young Nerds of Color* is a rare opportunity to bridge two projects with the same goals that overlapped in time and space—the exhibition is expected to run from February 3 through March 6, 2022.

Digital Gallery — In addition to physical spaces, we also presented the portraits and poems digitally on our website, <u>www.powetryofscience.org/</u>. We moved beyond physical borders and amplified our artwork to many communities through digital media. Our gallery and poetry pages have received over 3,000 pageviews, nearly a quarter of our website's traffic, and more than 85,000 impressions via Twitter.

Longfellow Carriage House Exhibition (National Park Service) – We are currently speaking to the National Park Service to exhibit our work at the Longfellow Carriage House for the 50th Anniversary of their Arts Initiative. However, this exhibition depends on future COVID-19 restrictions.

Poetry:

Boston Book Festival – The Boston Book Festival <u>hosted The Poetry of Science</u> at their annual Lit Crawl late last spring. Each of our seven poets read one of the two poems. We reached an assorted audience where poets presented at the Starlight Square in Cambridge throughout the evening. Our scientist participants come from MIT, Harvard, and Boston University, making Starlight Square an ideal location for our participants to meet for the first time outdoors (given the pandemic). The poetry reading took place on June 10th. (<u>Watch the videos here</u>).

Spry Literary Journal – In collaboration with our team, Spry Literary Journal created and published a special issue that featured the poetry and portraits made in this project. An entire literary journal issue with its community and networks has enabled us to expand our reach in Cambridge and beyond, building further project awareness and literary clout.

Exhibitions and Poetry Summary

We successfully brought The Poetry of Science to several distinct communities that showcase the incredible work of scientists and poets of color. In addition, our exhibitions reached BIPOC audiences throughout Cambridge and Boston. The primary in-person audience comes from MGH, with a patient population being 28% Black or Latinx. With MGH, accounting for people of color attending the Lit Crawl (25) and the MIT library over the installation period (260 extrapolated over the exhibition period), several thousand individuals will have viewed the in-person exhibition from the BIPOC community.

Digital Media: Strategies, Success Metrics, and Community Building

We measure the success of The Poetry of Science both qualitatively and quantitatively. Our successful outcomes included establishing relationships with local communities, making

ourselves known, increasing the importance of the intersection of science, art, diversity, and building a coalition across disparate groups.

In addition to developing essential relationships between institutions, centers, organizations, artists, scientists, gallerists, art directors, and poets, we also quantitatively captured some of these interactions. More specifically, social and news media coverage, email campaigns, and website visits.

As a result of our digital media efforts, our monetary return on investment surpassed the initial award amount from the Cambridge Arts Council. Below, we summarize our efforts and provide quantitative data where appropriate. As elaborated upon below, The Poetry of Science thrived despite the significant challenges brought by the COVID-19 pandemic.

News Media

Fourteen news articles or blog posts and one radio interview have covered The Poetry of Science. Coverage included local National Public Radio (NPR), MIT News, Boston University, MGH News, and the Cambridge Chronicle. Resultantly, news coverage significantly boosted the representation and voice of those involved in The Poetry of Science.

WGBH's Boston Public Radio—with Jim Braude and Margery Eagan—recently interviewed the director of The Poetry of Science, Joshua Sariñana, and participating scientists, Makinde Ogunnaike. The conversation focused on physics, neuroscience, art, poetry, religious faith, and the BIPOC community.

MIT News published several articles on students that took part in the project. These pieces emphasized the student's collaboration with their poet counterparts and the relationship between their racial-ethnic background, science, and art. The Arts at MIT and the MIT Alumni Association also published interviews with the director, emphasizing his scientific background and the project's inception, conceptualization, and vision.

Additional publications on The Poetry of Science included MGH News, PetaPixel Photography Blog, and Boston University, which focused on healthcare inequality, racial bias in photography, and other students' participation.

Website Metrics

The poetryofscience.org was paramount to the success of our project. Given the multi-media and multi-disciplinary nature of The Poetry of Science, our calls-for-entry process, various media channels, and strategies, we required a grounding hub to explain our project, showcase our artwork, highlight our success, and help foster a sense of community bringing disparate audiences together.

We established our website on February 20 of 2021. During our call for entry period, we quickly grew our website page views—in conjunction with our social media campaigns—to over 1,400 by the end of March '21. From the creation of the site, through the call-for-entry period, and up until the publication of the gallery and poetry webpages, we received 4,600 pageviews.

Strong growth continued after publishing the scientists' portrait gallery and the poetry page in August '21 (see Fig. 1). We garnered an additional 6,600 pageviews since their creation and December 18th of this year. To date, we have over 11,000 pageviews, which likely contributed to the nine news articles reporting on our project, one invited lecture, and one radio interview.

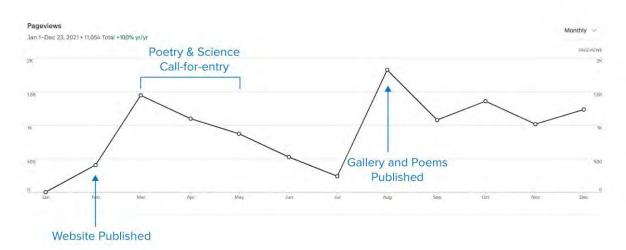


Figure 1. Website Total Pageviews Overtime

Initially, website visits were driven by direct link clicks from social media and referring sites (e.g., Cambridge Day, Boston Compass). However, as the project developed with more news coverage, distribution of our artwork, creation of art pages, the primary channel to find our site was through referral (e.g., MIT News) and search. Meaning, our social media strategy was successful. Additionally, our organic interest in the project grew as The Poetry of Science became well known in the community. We also successfully leveraged external outlets to communicate our project.

Social Media

The Poetry of Science pursued targeted social media campaigns via Twitter and Instagram. We established our Twitter presence in February '21 and fully developed our Instagram presence in August '21. However, we cannot report Instagram analytics due to their platform limitations.

To date, we have a combined total of 698 followers. We utilized Twitter and Instagram for our call-for-entry campaigns to showcase our selected poets and scientists, the portraits of the participating scientists, poems created by our poets, news coverage of our project, to promote our exhibitions, and the project's overall success.

Our Twitter account reached nearly 350,000 impressions (impressions are the number of eyes seeing the Tweets), over 1,500 likes, about 450 re-tweets. Additionally, our account acquired 500 link clicks (e.g., our website, news articles mentioned above, our exhibition events) and has an engagement rate of 1.8% (anything above 1% is considered exceptional). Given the age of our account, the particular communities it intersects (i.e., scientists and poets), and the size of our following, we have an outsized effect on our social media community.

Table 1. Summary of Twitter Metrics

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	Impressions	Likes	Re-tweets	Link Clicks	Engagement
Average	32890	153.9	41.7	46.1	1.75
Total	343100	1592	446	500	N/A

Call-for-Entry: We first targeted our poetry audience via Twitter, in part, by following poets of color, grassroots arts organizations, established arts foundations, writers' groups, and student groups. We focused on organic growth to establish followers then followed an ad-based approach for our call-for-entry campaigns (see Appendix II for costs).

We established early success by reaching out to influential accounts to share our call-for-poetry, such as:

- Mass Humanities
- Woodberry Poetry Room at Harvard
- GrubStreet
- Dorchester Art Project
- Massachusetts Review
- New England Review

Scientists and university departments were instrumental in broadcasting our call for scientists across Twitter, accounts, and influents researchers critical in spreading our call to local scientists of color included:

- Joy Buolamwini at the MIT Media Lab
- Steve Ramirez at Boston University
- SciArt Initiative
- The ArtBioCollaborative
- MIT Departments of Biology and Koch Institute
- Wyss Institute at Harvard University
- Reclaiming Stem Institute

Our call for poets received over 70,000 impressions, while our call for scientists received nearly 60,000. We received 25 submissions for poetry and 15 from scientists from the Cambridge area. Our social media strategy fueled the initial success of our project.

Artists' Work and Project: We successfully promoted scientists' portraits and poetry across Twitter. Artist-specific Twitter campaigns resulted in 85,000 impressions, over 100 re-tweets, nearly 300 likes, and 134 link clicks.

Indeed, our social media strategy furthered the reach of our project and the representation of our participants. We are confident that our social media presence, combined with our digital media and email campaigns, was crucial in receiving news coverage as described above.

Moreover, <u>MIT's Twitter</u> and <u>Instagram</u> accounts posted our work several times. Their platforms have over a million followers and have likely led to more than a hundred thousand additional impressions.

Email Campaign

Early on, we conducted a targeted email campaign to make The Poetry of Science known to the poetry and science community and to ask for assistance in helping broadcast our call-for-entry. We sent nearly 200 emails to notable poets, writers, artists, prominent scientists, communications heads, university departments, diversity, equity, inclusion initiatives, media outlets, and grassroots organizations to explain our cause and project.

Though we did not receive a response from everyone, when we did collect feedback, it was positive and constructive. In addition, our email strategy led us to develop connections with the local arts community, opened the door to other opportunities, and planted the seeds for our future success. For example, we reached out to Dunamis Boston, an agency supporting artists and arts managers of color for professional development, community-building, consultation, production, and advocacy. Neo Gcabo, director of marketing and community development, met with us and was very generous with her time. Neo was instrumental in helping us identify art groups emphasizing racial justice to spread our poetry call-for-entry (e.g., Dorchester Art project). She helped us imagine the project in new ways (e.g., focusing on a moving exhibition) and pushed us to create additional programming, which allowed us to flesh the project's vision. Her advice was essential given limitations with the pandemic.

We also reached out to Christina Davis, curator of Woodberry Poetry Room. We spoke with her, and she provided insight into the local poetry community and helped us share our call. As a result, we are talking with her about the opportunity to place our poet's work into Woodberry's Poetry Room's archives.

Digital Media Summary

The Poetry of Science exceeded our original goals of bringing art to the people, giving people of color a voice and representation, and building a coalition between disparate groups. We established clout and reputation in arts, writing, and science spaces, in part, through our digital media strategies. These approaches are responsible for the metrics detailed above and encourage community building through social media, exhibition spaces, and creative collaborations at the individual and group levels. Media outlets reporting on our project, the impressive metrics broadcasting of The Poetry of Science through social media and our website, and our email campaigns further broadcasted our poets and scientists, which often goes unheard in the research and literary community.

Our conservative estimate for our total digital gallery or poetry views is 86,000. We calculate 36,000 digital views from the BIPOC community given Black, Latinx, Asian, and Pacific Islander U.S. demographics (14.2%, 18%, and 5.7%, respectively).

The return on investment from our leveraged media coverage is ~\$3000-\$7,000, given the costs to hire or employ writers. In addition, The Peoples' heART contribution in purchasing the work for their permanent collection (images of these installations were used for digital marketing) puts us past the initial award amount from the Cambridge Arts Council for Racial Justice.

Project Conclusions and Discussion

The goal of The Poetry of Science helped advance racial and social justice by celebrating POC through the intersection of the arts and sciences. More specifically, by creating a new language to understand POC by combining poetry with scientific fields that include quantum physics, artificial intelligence, and synthetic neurobiology. In strengthening communities, building collations, and validating the realities of POC, we assisted in countering the negative associations driven by systemic racism.

We realized our goals by working with incredibly talented participants and with help from local organizations and institutions. More specifically, MGH, MIT, The Peoples' heART, and Dunamis Boston. With incredible art and support, the Poetry of Science exceeded expectations of transmitting our participants' message, reaching hundreds of thousands of people through news media, social media, and digital media. Our exhibitions at MGH and MIT, poetry reading at the Boston Book Festival, and lectures at the Longfellow House Historic Site (National Park Service) are a further testament to the project's success.

Gallery and Poetry

Sheena Vasquez



"Beneath a microscope, among/The most beautiful things/You can see: Yellow protein crystal. How it spikes and turns,/Spirals like a curly girl's hair..."

- Danielle Legros Georges

Jason Samaroo



"Emergent microbes adhere, dynamically motile, matrix-making./From topsoil to intestines cells stick/unstick as biofilm..."

- Sophie Laurence

Kathleen Esfahany



"Golden chalk glitters from my fingers/That create the curls and curves of/A contented Buddha..." Poet: Suparnamaaya Prasad. Scientist:

- Kathleen Esfahany

Michael Wells



"And as evening comes, perhaps as lights in the lab/are turned down low, there's quiet conversation,/and one last drink while sitting before the embers/of the charcoal fires..."

- Charles Coe

Shannon Johnson



"Nature./A rolling cacophony – bursting, bubbling, fighting, wrapping its energy around,/leaving only a trail of shredded flowers to follow."

- Luisa Apolaya Torres

Daniel Burje Chonde



"...If a hospital/is a living thing, it would be a big lake,/with fish and frogs, and animals making/their way around. What's the creature I'd be? ..."

- Danielle Legros Georges

Huili Chen



"I have 10 light sensors for eyes/But can't perceive tricks or lies/I'm designed in pink, orange and blue/All my undertones are decided by you..."

- Rachel Wahlert

Kareem Carr



"It's time to find new phrases, a different dialect/I leave behind the theoretical/And redirect my intellect/I find a way to reconnect/my head and my heart/And what I do best..."

- Suparnamaaya Prasad.

Makinde Ogunnaike



"With skin brushed then tangled,/with the apple touched at the supermarket then tangled, with the tear wiped then woven away, tangled with even things very distant like Mars dust,/that unravel themselves when /touched by our gaze..."

- Miriam Manglani

Nandita Menon



"She gathers her resolve, takes a deep breath/and rises from the bench, whispering a short prayer of thanks/to the eucalyptus tree that granted her this moment of rest and shade,/and perfumed the breeze with hints of mint and honey."

- Charles Coe

Christian Loyo



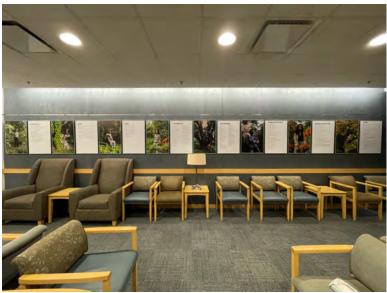
"The brown and orange leaves swirled around the questions I kept asking, emails/I kept sending. To cradle a larger microscope in my hands, to understand how/viruses and bacteria fight to survive..."

- Luisa Apolaya Torres.

Massachusetts General Hospital Cancer Center Exhibition

September 26 - November 13









Massachusetts General Hospital Lobby Exhibition

November 13 - 30





MIT Exhibition at the Rotch Library Gallery Space

