



## 2020 Biorocket Research Internship Podcasts Transcript

**Danya AbdelHameid (DA):** Hi, there! Thanks so much for listening to Genspace's 2020 Biorocket Research Internship Podcasts. Over the next 40 minutes you'll hear four podcast clips produced by this year's Biorocket interns. The Biorocket interns worked collaboratively over the course of seven weeks to research, write, and produce a short podcast clip about a science topic of their choosing. They covered everything from CRISPR gene therapies and "designer babies" to the environmental impacts of fast fashion and how the current COVID-19 pandemic is disproportionately impacting some communities.

Before we jump into the clips, I want to give you a bit more information about our Biorocket Program. The program, which is generously funded by the Pinkerton Foundation, the Achelis and Bodman Foundation, and the Siegel Family Endowment, is a spring after-school science program and summer research internship experience for New York City public high school students. Normally, the students spend lots of time in our fully-functional biology lab, learning basic lab skills and exploring the latest advances in genetic engineering...obviously this year's internship was a bit different because of the global pandemic.

But that didn't stop us from having a jam-packed summer, filled with many discussions about DNA, biotechnology, synthetic biology, , bioinformatics, ethical and social issues, advocacy, science communication, and of course, science podcasting.

We're so incredibly proud of our interns. We were absolutely blown away by what they were able to accomplish in such a short period of time.

Let's get into the first clip, produced by interns Amia Mcdonald, Yousra Ibrahim, and Henry Dorado.

**Yousra Ibrahim:** That was CRISPR CAS9 folks by Acapella Science, stay tuned for more. Today we are going to be introducing a technique called CRISPR. CRISPR-Cas9 is a unique technology that enables geneticists and medical researchers to edit and modify DNA. We first must understand that there is a reason why CRISPR and any other gene editing or modifying technology is desirable.

It is a tool and by inventing tools, we as humans were able to accomplish tasks that our human bodies could not, such as using a bow and arrow to kill prey, since our teeth were not sharp enough to pierce through many animals' skins.

Scientists are using CRISPR to edit the genome, which contains all the biological information needed to build and help organisms survive.

And Every human...well organism to be exact is made up of DNA that is responsible for genetic diversity among the organisms. If there was no genetic diversity we would all

practically look the same. Some ways we can use CRISPR in humans is to modify the way you look, what you're allergic to and even more complex things such as hereditary disease. And the list goes on and on.

Try to think of CRISPR like a pair of scissors that can go through that long list of DNA. CRISPR -Cas9 can make small cuts, and then our body's natural systems repair the DNA, making mutations and possibly changing our traits. Meaning that in the near future by editing immune cells that are responsible for allergies, no one will have to suffer from seasonal allergies.

We must first acknowledge that CRISPR-Cas9 is fairly new. We've only recently discovered its purpose is to edit one's DNA. Since then, CRISPR has flourished and been brought to more people's attention. Although we have a limited understanding of CRISPR - we've used it to edit practically everything cows, mushrooms, butterfly wings, and humans, etc. We could list all of the accomplishments, but now let's focus on an individual who paved the way by undergoing CRISPR treatments to battle against Sickle Cell disease.

**Amia McDonald:** Victoria Gray, a beautiful black woman, a wife and a mother of 4 beautiful children who has been battling sickle cell disease ever since she was 3 months old.

Sickle cell disease is caused by a genetic defect that turns healthy, plump and pliable red blood cells into deformed, sickle-shaped cells. The defective cells that don't carry oxygen well, are hard and sticky and tend to clog up the bloodstream. The blockages and lack of oxygen wreak havoc in the body, damaging vital organs and other parts of the body.

Victoria Gray knows this all too well. She explains to WBUR news in an exclusive interview her experience.

"Sometimes it feels like lightning strikes in my chest — and real sharp pains all over. And it's a deep pain. I can't touch it and make it better," she says. "Sometimes, I will be just balled up and crying, not able to do anything for myself."

Victoria Gray who didn't even question the treatment and "basically jumped at the opportunity" as her doctor said.<sup>1</sup> The treatment she received was called CTX001 which is a gene-edited blood stem cell therapy<sup>2</sup>. This therapy uses CRISPR Cas9 to edit a specific gene called BCL11A and suppresses the fetal hemoglobin. Now what is Fetal hemoglobin you ask? The fetal hemoglobin is a type of molecule in blood that carries oxygen to a fetus so the baby will develop normally.

A few months after the baby is born The BCL11A gene will turn on and the cells will stop making that type of hemoglobin to make adult hemoglobin.

In healthy people, this is no problem. But for people with sickle cell disease, their mutated adult hemoglobin will cause their red blood cells to start sickling, and with less oxygen getting to their body they have pain, infections, etc.<sup>3</sup>

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<sup>1</sup><https://www.healthline.com/health-news/first-person-treated-for-sickle-cell-disease-with-crispr-is-doing-well#The-journey>

<sup>2</sup> <https://sicklecellanemianews.com/ctx001-sickle-cell-disease>

<sup>3</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5363208/>

So if we can mutate or block BCL11A, people with sickle cell disease will continue to make fetal hemoglobin into adulthood, allowing their cells to carry oxygen normally and not have any symptoms of sickle cell disease.

This clinical trial that Ms. Gray signed up for targets this gene and turns it off. A year later, Victoria is thriving and living her best life sickle cell free.

**Henry Dorado:** CRISPR also known as Cas-9 is an enzyme that can cut apart DNA and eliminate any genetic sequence. This can be used to eliminate genetic mutations, find cures, and help humanity by giving us reliable genes. CRISPR has always been used in bizarre experiments. One of the bizarre experiments that have been happening, CRISPR being used to cure blindness. These are not the only bizarre experiments CRISPR Cas-9 has been used in. CRISPR cas-9 has been used in trials for cancer, HIV, and even smarter humans. But CRISPR can also be used to help mankind. Scientists have been using CRISPR cas-9 to create a nicotine-free tobacco, create immunity to diabetes, and even a new method for COVID-19 detection.

But something that really caught my eye that's really bizarre is cellular regeneration. A method known, where...organisms basically regenerate. Like, for example, the starfish, it's known that you can cut off one of their cones and they will literally regrow. Scientists have been trying to find a way to implement this method into humans. Think of it as evolution, but forced. The main...CRISPR Cas-9 exploits the concerted action of the cas-9 nucleus progromote in a single guide RNA. Meaning, they're basically going to take the genetic code that makes it happen in this living organism and implement it into humans.

There's been little work done on this, since it's something that doesn't seem realistic but there's still people fighting for it and see it as a possibility. The hope of it is that it can be used to regenerate tissue, bone marrow, and even get dysfunctional livers working again. CRISPR cas-9 is just the tip of the iceberg. There can be so much more done with CRISPR Cas-9, it's just a world open to imagination.

[music plays]

**DA:** This next clip was produced by interns Arnav Das, Siara Chowdhury, and Sydney Davidson.

**Sydney Davidson (SD):** Imagine this, it is the year 2100, and you've just stepped into DesignerBabies Co. You've been dreaming of this moment to have your perfect baby. The bright room is filled with young excited parents-to-be. You look to your right and notice a line formed in front of the virtual catalogue where you can select specific features that you want for your baby. YOu can choose hair color, eye color, or potentially prevent certain diseases.

The nurses are walking around in all white carrying big smiles on their faces. You've already met with the "designer" beforehand so this will be a fast process, granted you had to click past all those anti-designer babies ads. You are looking forward to seeing that petri dish transform into your perfect baby. This is what our future could look like...but should it? Here to help us answer that question is bioethicist Dian Liu.

**Dian Liu:** So, I think what we're referring to today is the very cheap, fast, and precise technology called CRISPR. Which we used to think would be quite expensive or not as accurate...you know, really fast and inexpensive. And I think that has real implications on the everyday people because some countries are already getting the go-ahead. Whether this topic interests you or not on an intellectual level, I think as...I will use the word consumers...we have to think of the scenario. It could be very soon that you have to make the decision, do you want one for your own child? What kind of advantage or disadvantage? As parents...you're going to place that child in, in a society where other people have selected certain types of traits that would be considered desirable.

So then...I want to say one or two words...I mean one or two things about the concept of designer babies...does that sound kind of materialistic? Or like a designer bag? This term in and of itself is deeply disturbing and disrespectful...to us as humans. It really diminishes us, really reducing our complexity into certain traits. I want to take a step back from that term because sometimes that term is so off putting, people don't think further what that means. So when I think about a way that we're influencing your future children, perhaps I should share a little bit about my personal bias.

Growing up as a female in a community-based culture, with a set of defined socially acceptable rules imposing on a girl...naturally when I think about when people would even talk about designing what your kid is like...you know, today there are parents that would provide plastic surgery to their children. And that was really hard for me to swallow, to be honest. I've gotten a bit softened to those kinds of enhancements. But just even to think that you could design everything...it's a bit hard for me.

Really, we're talking about, do children have autonomy? And at what age and stage should they? And how dare you? You think what you think is desirable...certain traits...that's based on your life experiences and how society works during your time. You think that would also work in a different generation? [laughs] Let's say I could do it...there's no risk, no social stigma...no judgement. It costs you nothing. I would be very terrified and scared to even commit to that action.

**SD:** Hearing from Liu about some of the ethical issues of genetic engineering in babies, it really gives us a perspective on what our future generations might look like. How does it make *you* feel to know that science might reshape the ways we procreate? And while we may not see this in this lifetime, it will likely be a running controversy that our future generations will have to face. We want to ask you this, would you be okay with having a genetically engineered baby?

This segment was produced by Siara Chowdhury, Arnav Das and Sydney Davidson as part of the Genspace Biorocket Research Internship Program. We'd also like to thank Elizabeth Tuck, Danya AbdelHameid and Bryan Campos for their help in making this segment possible.

**DA:** Next we have a clip from Jermaine Grant, Dani Cabrera, and Farrah Emam.

**Farrah Emam (FE):** Hey you! Yes, You! I have a quick question for you. Picture your closet for a moment. Are you picturing? Great. Now try to block out all the trash you may have around your closet, I know that might be hard but try Okay try to name every piece of clothing you

have. I'll give you 10 seconds.

Can you name them? If you can't you're not alone. Many people buy excessive amounts of clothing they barely use and will end up throwing out anyway. What's wrong with that, I mean you bought the clothes so you should be able to throw them out if you want right? If you want to throw away those ugly pants you bought off H and M (to be fair you thought they looked cuter online), you should be able to, right? If you just agreed with me you're part of the problem. Don't worry you're not alone! The average American throws away 68 pounds of clothes every year according to the EPA Office of Solid Waste! 68 pounds, more than the weight of an adult Mongolian gazelle! A whole GAZELLE. So in 5 years, you're in a way throwing away 5 gazelles! That's not even counting other members in your household!

In all seriousness though the increased popularity of fast fashion is dangerous and negatively impacts our environment in every aspect! Aspects such as socio-economics, environmental, ethics, etc. The practices and processes of fast fashion traditionally exploit developing countries, cause mass deforestation, cause pollution. We'll dive deeper into these impacts later. But for now I want to ask an important question. You may have heard before "fast fashion is bad" but do you even know what fast fashion is? If the answer is no then we're about to give you a crash course!...Oh and um if you do know what it is then just sit back and relax I guess.

Before the industrial revolution people were very sustainable with their clothes. Why? Most people only had a few pieces of clothing. This was because they couldn't outsource their clothes. They had to hand-make their clothes with wool, hand sewing articles of clothing. Back then you couldn't just go American Eagle. Hmm I actually wonder what stores back then would be called? American Prairie? American Turkey? The upper-class men and women had fancy clothes, but even those clothes would take months to design and produce. However, having more clothes that were "fashionable" was considered a major social indicator of wealth and class.

But then something big happened, the industrial revolution. The industrial revolution happened in the late 1700s in Great Britain and moved through Europe.<sup>4</sup> In the early 1800s it eventually made its way to America. Eventually, it became a worldwide movement. Now with the industrial revolution, say farewell to hand made methods and hello to machines! The industrial revolution brought upon mechanized factory systems and the rapid production of products. There are many effects of the industrial revolution A lot are bad like creating a great wealth gap between the bourgeoisie and the working class, child labor, pollution, deterioration of sanitary conditions in factories etc. But there are also some good ones Like the GDP per capita growth of many countries, mass migration from country lands to urban factory lands, world population boom, etc.<sup>5</sup> However, for this podcast let's just focus on one product. Textiles!

With this rapid industrialization countries could now make textiles at an extraordinary rate. For instance, in 1750 Britain imported 2.5 million pounds of raw cotton. Then in 1850, they

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<sup>4</sup> Horn, Jeff; Rosenband, Leonard; Smith, Merritt (2010). *Reconceptualizing the Industrial Revolution*. Cambridge MA, London: MIT Press. ISBN 978-0-262-51562-7.

<sup>5</sup> Robert Lucas, Jr. (2003). "The Industrial Revolution". Federal Reserve Bank of Minneapolis. Archived from the original on 27 November 2007. Retrieved 14 November 2007.

produced 588 million pounds in 1850.<sup>6</sup> This means clothing can now be produced at a rate higher than ever! Although many countries were producing more and more clothes, America actually valued conservation for a time. Especially during World War 1, where conservation of resources was needed due to shortages of labor and services due to the war.

During World War I, most clothing was repaired, and then it was recycled within the home as rags. During the war, clothing manufacturers reduced the varieties, sizes, and colors of their productions and even wanted designers to create styles that wouldn't use a lot of fabric and needless decoration. A minimalist approach to fashion.

Even the American Government had a conservation campaign that used slogans such as "Make the economy fashionable lest it becomes obligatory." This resulted in a 10% reduction in the production of trash.<sup>7</sup> However, after the war, America went back to fast fashion. The arrival of mass production has completely changed the fashion industry. Before clothes would drop in 4, 3 or even 2 seasons but now they're about 52 micro seasons meaning a new collection every week!<sup>8</sup> Now you may be wondering what is fast fashion though?

Well, fast fashion utilizes trends, rapid production, and low-quality materials in order to bring inexpensive styles to the public. If you're wondering how to spot a fast-fashion brand, don't worry we got you. Most indicators of a fast-fashion brand are...

Number one. Thousands of styles, which are centered around the latest trends.

Number two. When the difference of time the product was announced and when it was released is very small. Meaning, brands might announce a new line and in a short amount of time, they drop this collection. Traditionally, brands show off and tease their clothes in catwalks, paid promotions, etc. for a couple of weeks even months. However, now many companies are prioritizing quantity and speed and drop their collections days even hours after announcing them.

Three. They produce their textiles and have a lot of manufacturing factories offshore, which takes advantage of these countries which we will later get into.

Number four. They often have cheap, low-quality materials, where clothes degrade after just a few wears and get thrown away after a couple weeks or months.<sup>9</sup>

There you have it, a crash course in fast fashion! Now that you know the past let's get into the present impacts of this industry.

**Dani Cabrera (DC):** Hey y'all I hope you're all doin' well, my name is Dani and today I'm gonna get into the socioeconomic impacts of fast fashion. We're going to talk about the

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<sup>6</sup> Hopkins, Eric (2000). *Industrialization and Society*. London: Routledge. p. 2.

<sup>7</sup> Susan Strasser, **Waste and Want: A Social History of Trash**. New York: Metropolitan Books, Henry Holt, 1999.

<sup>8</sup> <https://www.thegoodtrade.com/features/what-is-fast-fashion>

<sup>9</sup> <https://goodonyou.eco/what-is-fast-fashion/>

<sup>7</sup> <https://www.nytimes.com/2018/04/24/style/survivors-of-rana-plaza-disaster.html>

<sup>8</sup> <https://www.sustainyourstyle.org/old-working-conditions>

people who sew your garments together and where these quickly made clothes up to trend are coming from. And I'm just gonna let y'all know now, but we're gonna get a little more serious about this topic because it has to do with people losing their lives.

Alright if you know what I'm about to talk about please raise your hand, the Rana Plaza disaster. If you're around my age I completely get it if you have no idea what that is since we were probably in elementary school when it happened but it's important to know where your garments are coming from. In 2013 a garment factory in Bangladesh collapsed, and killed more than 1,100 garment workers..

This is due to the lack of regulations in factories that put garments together. Before we continue talking about why this happened let's talk about how money plays a hand in all of this. In the modern world with the internet and social media, trends have become more influential than ever, we talk about the e-girl, e-boy, e-person outfit trend all the way to mom jeans. We're not going to get into exactly why these trends happen even though that's a whole societal construct topic but we are going to visualize.

Imagine there's a type of cake that everyone starts talking about, at first just the celebrities talk about it and can get it. But then companies see this cake and say "hey let's make some money" and so they find cheaper ingredients to make the same cake. But they don't order a small quantity of this cake, they want to make 1 million cakes. Even though those million cakes might not even get bought, and a good 85% is at one point going to end up in the trash. But that doesn't matter since all that these companies want is for these cakes to get bought what happens after isn't their concern, since so many cakes are getting made they're not special anymore so they end up becoming cheaper and those wonderful chefs who put the beautiful designs on these cakes get paid less than minimum wage because no fast fashion company would ever even want to waste money giving their hundreds if not thousands of workers proper compensation.

And if the company doesn't want to give their workers minimum wage, you can throw out any idea of keeping their workers safe. Because as long as their hands can put the decorations together that's all that matters to these companies.

So now let's replace those cakes, with garments. What you see in the fast fashion industry are clothes that are up to trend and a refusal to give their workers proper compensation for the hard work that they do. A lot of people don't realize this, but there's a team of people out there right now that put the clothes you're wearing together. And we need to put this information into the light, even after the Rana Plaza incident, workers still work in unsafe conditions and get paid less than minimum wage. With that, they're not even allowed to form a union, their rights as workers are stripped away.

Now after learning all of this, keep that in mind the next time you buy a piece of clothing from a fast fashion company. But let's go back to my wonderful friend and lovely podcaster Farrah to talk about what's being done today in NYC.

**FE:** Dani did a great job explaining the unfortunate impacts of the fast fashion industry, especially in overseas countries and in regard to the environment.

We live in New York City, and New York City has been very supportive of the environment reform. Recently even making major changes to ensure we are environmentally friendly such as protecting the water supply, lowering our carbon footprint, having urban gardens...

NYC even made a plan called the OneNYC that enforces radical change that sets to rescue the City's greenhouse gas emissions to 80 percent by 2050 and eliminate waste sent to landfills by 2030.<sup>1011</sup>

So you think we wouldn't support fast fashion, right? Especially considering that it's not environmentally friendly at all. Well according to the stats, that's not true. About 200 million pounds of clothing ends up in New York City's landfill, many if not all of which come from fast fashion brands. Additionally, there are hundreds of fast fashion brands located all throughout the city. They are concentrated in neighborhoods and areas such as Fifth Avenue, Times Square, Tribeca, Soho, etc. All of which are heavily populated neighborhoods that reach a large audience.

You may be confused as to why NYC supports a lot of. Well, it's because we don't really know the harms of fast fashion. And when there's not a lot of awareness about a situation mass reform doesn't happen from the public.

Take the metal straws for a second, why did everyone ditch the plastic straws? Because there was a surge of awareness about the harms of plastic straws. Also because of the turtles, save the turtles. Always save the turtles.

But there isn't that huge surge yet for the harms of fast fashion. Also, we don't have a nice slogan. That's a big reason why we're making this podcast because we want to bring awareness. We want to offer a lot of alternatives to you guys. Try to go to your local boutiques. Try to support your local business instead of going to fast fashion brands. And we understand that those may be very pricey and if you come from a low-income family, go thrifting. They offer great and cheap alternatives.

**DC:** So in the future let's imagine a world where everyone can afford the clothes they need, garment workers are compensated fully for their work and there isn't an overproduction of textiles that end up in the trash. Being serious about what our futures look like, this world I've imagined likely isn't going to happen anytime soon, but there's many ways we can get there. The only thing is, we have to put in the effort to get there.

Whether it's putting your clothes in a donation bin in your neighborhood or listening to this very podcast. To quote my pre-calc teacher who I love but stresses me out, "one of the best and if not easiest ways to make a change, is by educating yourself." In other words, knowledge is power. A lot of people take this idea for granted, they don't realize how *much* power is had with every book that is read or piece of information absorbed into their minds. We have to take the next step, which is informing our peers and even parents about the importance of knowing where your garments are coming from. Learning about the history of the world and objects that are a part of our everyday lives. Letting people know that there is a possibility to a better future, but we all have to work together.

A little thing you can do that I learned from our guest Flora Gill is to learn how to sew, you don't need a sewing machine (although if you want one you can get one) but go to that aunt of yours that can teach you, all you need is a needle and some yarn/string. And once you know how to sew you can even add some decorations to your clothes when they're getting a little old adding a couple more months or even years to that pair of jeans you probably

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<sup>10</sup> <https://onenyc.cityofnewyork.us/#main-content>

<sup>11</sup> <https://www.nycgo.com/articles/green-guide-to-nyc>



have at the bottom of your closet. Helping those textiles stay out of the landfill and even saving yourself some money.

Now that I've given you guys all the tips I can for the moment and even shown you guys my wonderful singing voice, I hope you all have a wonderful day and learned a little something. I hope that this will inspire you to do a little more research and make a change in this world...

**Flora Gil:** My name is Flora Gil. I am a fashion designer, I've been working in the industry since 2002, professionally. And I worked for Karl Lagerfeld before starting my own brand Ohne Titel in 2006. And I ran that company with one of my best friends for about ten years. So, there's that...and then like you were talking about, recycled clothes. A lot of those things are a bit of greenwashing. There's a market for recycling water bottles and turning them back into water bottles. As soon as you turn a water bottle into a piece of fabric and then you put that fabric into a garment that has other parts that aren't made of water bottles, that item of clothing is getting progressively less recyclable as it goes. And it's more likely to turn into trash. And you know it's great that you took it out of that one cycle, but it's endlessly recyclable as a water bottle. Like turning a water bottle into a water bottle. Or turning a water bottle into another recyclable plastic good. Like a strawberry container. That can happen over and over again. But it's really hard to recycle clothes. People lie about the content...you need to be a tactical person to identify the difference between this kind of polymer and that kind of polymer. Almost like you'd need people with a bachelors degree to sort the clothes...and no one wants to pay for that.

**Jermaine Grant (JG):** Thank you for listening to our podcast. We want to give a special shout out to the Genspace team. Beth Tuck, Bryan Campos, Angela Armendariz, Danya AbdelHameid, Leticia Cartier Oxley, and Dr. Janina Jeff a geneticist and podcaster of "In Those Genes" who inspired us to make our own podcast for their help in making this segment possible. We also want to give a special shoutout to Flora Gill, who was interviewed in this podcast. Thank you.

**DA:** And lastly, we have this clip from Agalby Morel, Leslie Calle, and Sujana Yeasmin.

**Leslie Calle (LC):** Welcome to CoronaVirus rewind, I am your host Leslie Calle and today the topic we will be speaking about is COVID-19, otherwise known as the Coronavirus. As well as having some guest speakers join us.

**Sujana Yeasmin (SY):** You've probably heard about COVID-19. You know the respiratory virus that causes symptoms like dry cough, fever, shortness of breath, and difficulty breathing. You've probably also heard that the novel coronavirus that causes COVID-19 was declared a WORLD pandemic in early March. But we're not here to talk about COVID-19...well, at least not in the way that you think we are...we're here to talk about the social impacts of COVID-19, we want to focus on the stuff you don't see in mainstream media. But if you want more information on COVID, go to the WHO or CDC website.

**LC:** Goodmorning Janina. Thank you so much for joining us today to talk about COVID-19. Tell us a little bit about yourself and what you do for a living.

**Janina Jeff (JJ):** I am Dr. Janina Jeff. I am a genetic epidemiologist and population geneticist by training. I also have a podcast. And so since the covid 19 pandemic started, I had been

doing some updates on my podcast informing the black community about all the things they need to know about COVID-19.

**LC:** What has your experience been like because of COVID?

**JJ:** so I'm a computational scientist, what that means is that I do all of my science on a computer and a lot of genetics is on the computer. And so since COVID-19 Oh, because all of my work is on the computer. I've always worked from home. I've been working from home for about five years now. So working from home was not a big transition for me.

**LC:** Would you mind talking a little about your COVID-19 experience?

**JJ:** I knew very early on that COVID-19 was going to disproportionately affect black and brown communities. kept a healthy distance away from other people, so I wouldn't get sick...I hadn't taken into account how the virus lives on surfaces. And so what happened, what I think happened is that I share surfaces with other people who live in my building...I am assuming one of the persons who was a flight attendant may have come in contact with the virus and while he did not get sick, there were two people in our building who did get sick and myself being one of them...that's how I think I got and it's ironic to me, because it just goes to show you how easy it is to get the virus even when you are being precautious as I was.

**LC:** Thank you so much for allowing me to interview you Janina and now we'll move on to our next guest, Alexa Aviles who will speak about her role in her community throughout the pandemic.

**Alexa Aviles (AA):** My name is Alexa Aviles...I work in a private foundation, where we give grants to nonprofit organizations.

**LC:** I have heard that you have been helping out your community in various ways throughout COVID-19...if you wouldn't mind speaking a little bit about that.

**AA:** I'll start by saying, you know, this virus has been really traumatizing for all of us and certainly so Some of our community has been more impacted than others. I was getting a lot of calls from just folks in the neighborhood that needed help and guidance. early on, it was just really responding to neighbors, families and friends, anyone who just reached out and I think as the as the The virus continued on and got more and more serious and we started to see you know, family and friends getting sick and and losing jobs and being concerned about all the all the effects of what was happening. I guess the work changed a little bit. And so I've always been very committed to the community and always try and find ways to help folks and connect people to resources in the neighborhood and just continue to do that throughout the Coronavirus. I was just kind of making a lot of referrals helping people get there were, you know, folks who were undocumented who were afraid to go to the hospital and trying to connect them to doctors over the phone.

But like all terrible situations without a unite and support each other and that's how you kind of get through disasters as you kind of just help each other through it. So it changed and you know, it evolved eventually into doing several food banks in the neighborhood for people who needed food. I mean, I was grocery shopping for anybody who called who

needed help. I was fortunate enough to be working. And it just felt like my responsibility to help my neighbors.

**LC:** Alexa, I've heard on the news you were able to create a memorial for those who have died during COVID and they were not given the opportunity to be sent off correctly...if you can explain more...?

**AA:** Having lost family members right in and not being able to be in the funeral together...was really traumatic for hundreds of other families across New York City. It felt like people just disappeared and you couldn't touch each other to console one another. You know, all we saw in the news was there was 10,000 people, 20,000 people, all you saw was numbers...the fact that these were people's family members and friends who were unnamed. It felt like the world was trying to rush past their loss. We created a memorial and we did it in conjunction with a group called Naming The Lost and they did a 24 hour reading of names from across the country to honor them. The project was really a way to give people space to collectively acknowledge their loved ones. And to stand there and mourn and remember...which is something we were all cheated out of because of the way we had to deal with COVID...there weren't funeral services and you couldn't be with each other. And that, hopefully gave a little bit of space for people to come and name their loved one and talk about their loved one...and to know that they weren't being acknowledged because they weren't just numbers. They were family members who need to be honored.

**Agalby Morel (AM):** Hey y'all this is Agalby, your producer and sound editor. Let's take a moment to talk about how exactly Latino and Navajo families have been affected by COVID. According to BBC News, The Navajo Nation's unemployment rate is approximately 40%, and a similar number live below the poverty line, earning less than \$12,760 a year.<sup>12</sup>

These factors exacerbate health problems among the Navajo and a third of the population suffers from diabetes, heart conditions, and lung disease. The reservation's dozen medical facilities hold just 200 hospital beds. As a result, some coronavirus patients have been moved to makeshift quarantine facilities, while others have been transferred to hospitals outside the reservation, which is important because it means that people have to travel far in order to receive medical care. Not to mention, about 30 to 40% of residents don't have running water, which makes following basic CDC guidelines, such as hand-washing, almost impossible.

The CDC says Latinos are hospitalized from the virus at four times the rate of white Americans. Twenty-six percent of people who've died from COVID-19 in this country were Latino. Let me explain why.

Our population as a group is disproportionately represented in the essential workforce in the U.S. and has been - as a consequence - overexposed to the virus. Not to mention, we also have very little social protections including health insurance.<sup>13</sup> Latinos have, overall, much lower rates of health insurance. The government has placed limitations on access to health insurance for the undocumented immigrant population. Undocumented immigrants

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<sup>12</sup> <https://www.bbc.com/news/world-us-canada-52941984>

<sup>13</sup> <https://www.npr.org/2020/07/01/885878571/why-covid-19-disproportionately-impacts-latino-communities>

also experience iatrophobia in the sense that they're afraid of receiving medical care because of the risk of being deported.<sup>4</sup> So what do we do about this?

Mutual aid is when individuals in a community take direct action, and this is important because our communities can take care of each other without relying on inherently white supremacist, capitalist, settler-colonial modes of governance, or charity networks run by white people with the savior complex. In this podcast we not only want to shed light on information not shown in mainstream media, we also want to amplify the voices of activists who are taking direct action in their communities.

One of them is the Navajo and Hopi Families COVID-19 Relief which is a fundraiser on gofundme dot com and it is grassroots organized by community members on the reservation. They do constant deliveries of supplies, food, goods and aid for Navajo and Hopi families.<sup>14</sup>

And lastly, if you would like to donate to Dr. Janina Jeff's podcast In Those Genes check out In Those Genes dot com for details. They have a donation button on their website. And most importantly, stay woke, stay educated and stay safe.

**LC:** This segment was produced by Leslie Calle, Agalby Morel, Sujana Yeasmin as part of the Genspace Biorocket Research Internship Program. We'd also like to thank Beth Tuck, Angela Armendariz, Danya AbdelHameid, Bryan Campos, and the Pinkerton Foundation for their help in mentoring us and funding our podcast.

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**Acknowledgements:** Our intro music is [Dreaming Days by Ketsa](#), licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 License.

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<sup>14</sup>[https://www.gofundme.com/f/NHFC19Relief?utm\\_source=customer&utm\\_medium=copy\\_link-tip&utm\\_campaign=p\\_cp+share-sheet](https://www.gofundme.com/f/NHFC19Relief?utm_source=customer&utm_medium=copy_link-tip&utm_campaign=p_cp+share-sheet)