

Transcript of Lab 043: Understanding HIV Part 2

Titi: I'm Titi

Zakiya: and I'm Zakiya

Titi: and from Spotify, this is Dope Labs. Welcome to Dope Labs, a weekly podcast that mixes hardcore science, pop culture and a healthy dose of friendship.

Zakiya: This week we're continuing our two part series on HIV. There's just so much to cover. We couldn't fit it all into one episode.

Titi: Yes, and last week we really dug deep into the science behind HIV and the history of HIV vaccine development.

Zakiya: We talked about the structure of HIV, remember the glycoproteins and how it infects the body.

Titi: We also talked about how an HIV vaccine could work and why developing an HIV vaccine is so difficult to achieve.

Zakiya: So this week we're going to shift from the science to the people because we know science doesn't happen in a vacuum.

Titi: Our goal is to take what we learned in part one and overlay some cultural context. Sound good? Let's get into the recitation. All right, so what do we know?

Zakiya: Let's unpack the thing that we always say, which is the science doesn't happen in a vacuum. There are factors that determine whether or not something is science worthy or research worthy. And you have to consider what's the climate, what's the political or social climate? Is it even seen as urgent?

Titi: It also depends on if a certain demographic is affected by certain diseases.

Zakiya: Right. Also, beyond just who's affected? Is there stigma around even working on these things? Is there any type of health risks? What's understood or not understood at the time where we're trying to make discovery?

Titi: Right. And there's also scientific communication that is a branch off of the science. So it's when the science is being done, when the research and development is being done, how it's communicated to the population, if at all.

Zakiya: That's a very good point. So these are all really vague, and I think that takes us right into what we want to know. We want to know the specifics around this.

Titi: Yeah. Which communities are affected the most by HIV? And has it changed over time? And how has that affected vaccine development?

Zakiya: Who were the decision makers? What was the initial guidance that affected the scientific response to HIV diagnosis, prevention, public health interventions, treatments, medicine and eventually vaccine development?

Titi: And then a question that I have is if and when the vaccine does become available, what is the strategy moving forward for the scientists and the people in the medical field that will be administering these vaccines? We've already seen what happened with COVID. What's the game plan for the HIV vaccine?

Zakiya: Let's jump into the dissection.

Titi: You all know, Christine, Dr. Daniels, by now. Christine recently finished her postdoc at Duke University, where she worked on developing and testing new or novel vaccine candidates.

Zakiya: One of the reasons we really wanted to talk to Christine for this series is because of her unique background. She's not just focused on the biology of a vaccine.

Dr. Christine Daniels: My background from undergrad is actually medical anthropology. I'm always interested in how the cultural lens impacts the way people experience and treat disease.

Titi: If we really want to understand the story of the HIV vaccine from all angles, we need to understand not just the science, but also the culture around HIV. So let's dive in.

Zakiya: So we're going to start with a little bit of history. In part one, we talked about a couple of different vaccine trials that show various levels of success. There was the first large scale phase three clinical trial of Vax 004 in 1998, but that ultimately failed. And then fast forward to 2003. The RV 144 trial was the first clinical trial with some proven efficacy, but it was only around about 30 percent, which isn't anywhere near enough to get approval.

Titi: But I mean, when you think about it, 1998 ...2003 isn't that 20 years after HIV was first discovered?

Dr. Christine Daniels: If we think about historically HIV its origin, people started realizing that they were infected around the 70s, but we didn't see a big push towards trying to develop treatments for it until late 80s early 90s

Zakiya: AIDS was first diagnosed in 1981. The virus, HIV was first isolated and confirmed to be the cause of AIDS in 1983. So, yeah, 1983 to 2003. That's a big gap. To do these numbers suggest this. We really have to paint the picture of what 1981 looked like.

Titi: Yeah, so just picture it. It's 1981. The number one song from the year is Bette Davis Eyes by Kim Carnes. I don't know that song, but the number two song is Endless Love by Diana Ross and Lionel Richie, which we know and Lady by Kenny Rogers. And then with movies, the top movies in 1981 were Indiana Jones Raiders of the Lost Ark, one of my faves, Superman two. So that is with Christopher Reeves. And then 9 to 5 with the woman we love Dolly Parton, our hero.

Zakiya: And, you know, even when you think about what did the technology look like in Superman two, right? We didn't have all these advances in technology that make it hard for us to think back to what health care workers and doctors had in the 1980s. Just for some additional perspective, gloves were used to protect doctors hands back in the day, so people are using gloves in surgery, but not in other places. So not if you were getting blood drawn that if you had like a little outpatient procedure, no gloves just out here. And when people were using gloves, it was often thought to protect doctors hands at the onset of glove use. But then later on in the 1980s, with AIDS becoming more prevalent, people started using gloves more just as like universal precautions for our healthcare workers everywhere. Gloves didn't become required by OSHA, which sets your occupational safety standards until 1992, and that was to protect workers who came in contact with body fluids. So you can imagine people didn't know what was going on.

Titi: That's less than 30 years ago. Could you imagine a doctor coming towards you and being like, Hey, let's take a look in that eyeball and touching your eye?

Zakiya: No, just fingerprint to sclera. I don't think so.

Titi: Pink eye for everyone. No way. In 1981, the population in the U.S. who tested positive for HIV was estimated to be ninety three percent male and 56 percent white. Sixty three percent of positive cases were transmitted via male to male sexual contact and 25 percent from intravenous drug use.

Zakiya: During this time, the stigma and discrimination against those most affected, gay people and people who injected drugs, was staggering.

Dr. Christine Daniels: And so there wasn't a big political push to try to fund or direct research efforts towards addressing this problem because it wasn't affecting the dominant population.

Titi: In fact, many people in positions of power allowed their own personal beliefs to affect their actions and responses to the HIV crisis. Not only politicians, but insurance companies,

researchers, drug manufacturers, doctors and support systems like folks, family and friends who believe that the specific behaviors associated with contracting HIV were inherently wrong.

Zakiya: And because they thought they were inherently wrong. They then consider these groups undeserving of help or of maximum effort to control the spread of HIV.

Dr. Christine Daniels: It's a very controversial issue. A lot of our policy is influenced by religious beliefs. A lot of people use religion as an excuse to discriminate against certain people who have behaviors or lifestyles that they don't agree with. People are, you know, I'm a Christian, so I can't support gay marriage or anything. And that's not in the Bible. You're using the text and interpreting it a certain way to push a certain agenda. And so it's not religion that is dictating that these groups should be ostracized. It's your interpretation of that.

Zakiya: And your interpretation is subjective. That's a choice that people make, but also everyone doesn't subscribe to the same religious beliefs. So who's to say that one section of the population gets to make the decision for everyone else? And objectively, these are human beings. We all deserve access to health care, secure housing, you know the basics.

Titi: The media also failed to cover the epidemic properly. During the first three years of the HIV epidemic. The New York Times only ran three stories on it, and none of them made the front page.

Zakiya: And geography was also an issue that impeded widespread education, prevention and treatment of HIV and AIDS at the outset. Most cases were being reported in New York and California, so lawmakers in other states were reluctant to use funds on HIV that could have been spent otherwise on roads, education or infrastructure.

Titi: This sounds so much like COVID. This is that vacuum that don't exist. All these different things that affect how we digest the information and how we interact with all of these new things. I mean, we just went through media, geography, religious beliefs.

Zakiya: I mean, think about at the outset of COVID, right? Some people weren't covering it or they were saying, Oh, this is only in China. It doesn't matter for the United States. And then even when it was in the United States, when it was affecting New York and California in our most densely populated areas, people in other states weren't doing the things that they needed to do, like implementing mask mandates or ramping up testing. And here we are seeing the exact same thing because they want to spend those dollars elsewhere.

Titi: This is why I was so important for us to start out with the history of this virus because you don't know where you're going if you don't know where you came from. And history often repeats itself. And so knowing the history helps us better prepare for things like this in the future. It should have helped us with COVID, but it didn't, because we have chosen to stay blissfully unaware of some of these outside factors that are also playing a role.

Dr. Christine Daniels: It took a longer time for people to adopt that more inclusive mindset and so that all the focus on HIV vaccine development and treatment development. So we didn't start

to see that arise until people who didn't come from those stigmatized groups started to be infected at higher rates. Once we started seeing heterosexual white men or heterosexual women and other people that are part of the dominant culture become infected, then it became a problem. Once we started seeing celebrities become infected and high profile people start dying, then it becomes a problem that the average person cares about.

Zakiya: Today, approximately 1.2 million people have HIV. That's a little under half of one percent of the U.S. population.

Titi: And that percentage is disproportionately higher among marginalized groups, including sex workers, trans people and people of color.

Zakiya: But we also know that we have some blind spots.

Titi: I think it's important to know and understand that statistics don't paint a full picture. Data is helpful to see overall trends, but most data is incomplete. Some of these statistics and the way that some of these numbers are put together, you have to take them all with a grain of salt. There are so many factors that go into how the data is collected. Do people feel comfortable with disclosing this information? Who are they asking? How are they asking? Are the questions clear? And it gets even more complicated when you start to go down into marginalized communities, black folks, people who are living with disabilities, people in the LGBTQIA community. All of these populations, they've been excluded from so many of these conversations. It's been used to violate them in the past. Disclosing meant loss of jobs, disclosing meant social stigma. It completely changes your life.

Zakiya: That provides a lot more context, Titi, about why we see sex workers or trans people or people of color with higher rates of HIV in these slices of the population because they have higher risks. These categories aren't biological. And so when you see these things come together, it's because of social influences, and these types of gaps can potentially lead to problems where people affected. The most are excluded or misrepresented in studies.

Titi: Another thing that's changed a lot since 1981 is that there has been a lot more education and media coverage.

Zakiya: Yes, movies and TV shows have evolved in terms of the stories that they tell about people living with HIV. One that I've been really enjoying lately is It's a Sin on HBO Max, which tells the story of the early 80s and the identification of AIDS, and that it leads to HIV from the perspective of a group of friends living in. I think they're in London. And you see how they're like, Oh no, this is only issue if you sleep with American boys.

Titi: Oh my goodness.

Zakiya: And that was the framework in the mindset, which doesn't feel that different from this is only an issue. If you travel to China with COVID,

Titi: you remember in the real world when Pedro Zamora. That was my first introduction to someone. He's not a fictional character that had HIV, and they were showing him on television. And I felt like his story really impacted what people generally thought about folks with HIV and really humanized that population a lot.

Zakiya: You know what? I remember that movie with Denzel Washington called Philadelphia.

Titi: Yes. Another really good one. I loved that movie. Well-known celebrities including Billy Porter and Jonathan Van Ness have recently talked openly about their HIV diagnoses.

Dr. Christine Daniels: Now, all of a sudden, there all of these campaigns and committees and small organizations that are leading efforts to try to devote attention and funding and resources towards addressing this problem. But the problem wasn't new. The problem has been there. It just wasn't pushed to the forefront of attention. And so that's kind of what stalled the efforts.

Zakiya: Let's take a break, and when we come back, we'll keep talking about why it's taken so long to develop an HIV vaccine. We're back and we want to tell you about our lab for next week.

Titi: Next week, we're celebrating the end of 2021 with our annual end of the year mixtape. We'll be talking about the biggest moments from 2021 and doing a mini dissection on each of them.

Zakiya: And in January, we're really excited about a four part series. We're doing all about wellness, self-care and how to brush up on your habits in the new year. And we want you to be a part of it.

Titi: We want to know your New Year's resolutions for 2022. Are you making a list or did you skip resolutions altogether? What are you focusing on? We want to hear from you. Call us at two zero two five six seven seven zero two eight and leave us a message. OK, let's get back to the dissection. In the first part of the dissection, we discuss some of the social and behavioral context around who is predominantly affected by HIV. And so now it all makes sense as to why it's been an uphill battle to developing HIV vaccine.

Zakiya: So at the onset, you have people who feel like this isn't worth investing in from our political leaders to big corporations. And we saw what it took for something that affected everybody for us to get things going. Just in 2020, imagine also what we're talking about is 1980s science. OK, yeah.

Titi: Science with acid wash jeans

Zakiya: Yes. OK, I don't know how many advances you can make with acid wash jeans.

Titi: And all that hairspray.

Zakiya: And all the hairspray, but you got to give these scientists credit, OK? They continue to work on this and work on this just to give you some perspective in the early stages, so like around 1985, I think that's when they first had the like official HIV diagnostic test. OK, so we're talking about 1981 to 1985 with no standard test, right? These are people observing symptoms and trying to figure out what could possibly be going on in these different patients. That first test the way it was designed, you could get a non-reactive kind of like negative test result. That negative window was eight to 10 weeks after exposure, so you needed to wait at least 10 weeks after exposure or potential exposure for you to be able to say confidently negative or positive. That's a long time.

Titi: That is a very, very long time.

Zakiya: So fast forward. I mean, now that's not the case anymore. Right? But so from 1985 to 1990, when they got that down from eight to 10 weeks to test that only had a two to three week window is mind boggling to me that they were able to make that type of progress without the tools that we have available right now.

Titi: Right. All they had were trapper keepers. Putting your lab notes in a trapper keeper.

Zakiya: And so what we also have to consider is what population or what group of the population was most affected by HIV? And are these the same people who are making decisions about drugs, treatment policy, public health support? Are those the people making the decisions around HIV? And Christine says that representation in those spaces is absolutely crucial.

Dr. Christine Daniels: When you think about from a research standpoint, the people that are in a position to decide the questions that research don't look like the populations that are affected. So if those people aren't in the room, they can't direct the questions. And so we see a lot more research funding or research done on things that impact the dominant culture, such as breast cancer instead of things like sickle cell that affect predominately African-Americans or minorities. So we have the funding issue. We also had the representation issue. If we're not in the room, we can't drive the conversation, we can't direct it.

Titi: Dr. Daniels identity is inextricably linked to her work. Diseases she chooses to research are the ones that most frequently impact people who share her identity.

Dr. Christine Daniels: I personally don't think you can separate the two like, well, I can't because of my identity. I am a Black woman. And so the way I approach research, the way I think about the questions that I'm researching is always going to be influenced by my identity. And so the disease that I choose to research are typically diseases that more frequently impact people with my identity or similar identity.

Zakiya: Christine saw the disparities in how they can affect decisions that are made firsthand when COVID started

Dr. Christine Daniels: and when the pandemic first started. We were in these multi-day symposiums where people are just trying to understand what was going on. So what's impacting

these people? How is it happening? How is it spreading? What do we do to contain it? How do we treat it? How is it working? And things like that and who do we prioritize? And one of them recently came up one time because a person asked about the prevalence amongst minority communities. The person said that because African-Americans have higher rates of obesity and hypertension, that that's why is more prevalent among us. And that's what we're dying because we have all these preexisting conditions. And that was it.

Titi: If you're not acknowledging the context in which people are living when talking about preexisting conditions, you're not painting the full picture, you're not telling the whole story. Race is not a biological category. So we're talking about things like access to good health care, socioeconomic status, even things like your ability to social distance. Not everybody can do that. Your housing conditions or the type of job you have might make it impossible for you to do that.

Zakiya: One thing Christine talked about that was really interesting was that disparities in representation can also lead to disparities in terms of technology and access.

Dr. Christine Daniels: I worry we're developing more and more high tech technologies because we can, but we won't be able to actually benefit the people who need it the most, because now it's cost prohibitive because so much money goes into developing them that now it won't be marketed at a price point that the people who needed it most, the people who it was designed for, can benefit from it. Do you have to be in a hospital to get administered this? How feasible is it for someone to go and get repetitive doses of something? I don't think that scientists think enough about who they're trying to help.

Zakiya: And that's something that we're seeing with COVID, right? One of the things was that the vaccine had to be refrigerated and which countries can afford to buy these therapies. That's important.

Titi: That's such a good point. I mean, what's the point of a treatment if only the top one percent can afford the drug? We talked about Prep in part one of the series and how it's an effective preventative drug for HIV. But we didn't mention the cost a 30 day supply of prep costs one \$1758. That means annually it could add up to over \$21000.

Zakiya: That is ridiculous.

Titi: In July of this year, the federal government passed a law mandating insurers to cover prep drugs 100 percent, including clinic visits associated with Prep. That's a big deal.

Zakiya: That's huge. Yeah. And the CDC just released new guidelines.

Titi: Right. And it added a recommendation to doctors to inform all sexually active adults and adolescents about Prep.

Zakiya: I think that's going to go a long way in raising awareness and reducing stigma.

Dr. Christine Daniels: Scientists care about the science. They want the coolest technology in the most high tech thing, but people from different identities think about them and think about how would this work? Like, would my friend, cousin, sister, mother actually be able to use this? I think about this a lot in terms of cancer. I think about how much money will go into funding a drug that will extend the life of a cancer that already has a pretty fair prognosis versus, you know, studying one work will have less options.

Titi: When we get into conversations about race relations or the experience of people of color in America. There are some people who, while you're in that conversation, they say, Oh, I'm just playing devil's advocate. And so that I really like to quote Quinta Brunson and I say, Go play devil's advocate in hell. We're talking about somebodies ability to live. You know what I mean? Like, we're talking about life. Someone's life. We're talking about safety. We're talking about the safety of people's family, of their friends, their closest people, their loved ones and everything like that. So for you, it might just be a mental exercise and you think, Oh, I'm just strengthening this debate muscle that I have or whatever. But for some people, it's life or death.

Zakiya: It really is. And I think if there's one thing we've learned, it is how important the introduction or rollout of any effective treatment is to whether or not it gets even considered by folks, right? Whether folks are even willing to talk about it, think about taking it, let alone take it as recommended. Right. So I think that's something we've learned from COVID, and we got to figure out how is this going to work when an effective HIV vaccine does arrive?

Titi: We've seen the pitfalls of a bumpy vaccine rollout this past year with COVID. There's been a ton of misinformation around the vaccine, and you can hear more about that in Lab 037 called in denial.

Zakiya: We wanted to know from Christine what kinds of barriers she anticipates once an HIV vaccine does hit the market.

Dr. Christine Daniels: HIV is an STD, so already you're going to have opposition because people don't like to think about sex or sexual transmitted diseases and youth. And so in order for us to get widespread population as what we've seen with COVID, we have to get children vaccinated too. And so I see opposition for parents not wanting their children to get something that's associated with sex because they think that that might encourage them to have sex. And that's not the case.

Titi: Right. We saw this with the HPV vaccine. HPV is a very common and highly transmittable STD that's linked to many types of cancer, including 90 percent of cervical cancer. Doctors recommended getting the two dose vaccine in adolescents, but many parents were hesitant, and it's not just because it's an STD. It's also because of misinformation in general.

Dr. Christine Daniels: The other opposition, again, I would say, is vaccine hesitancy broadly not speaking about just African-Americans and Hispanics or any one population, but just people who don't think vaccines work. They base their belief in the ability of a vaccine to work on the flu vaccine, which doesn't reach the level of efficacy that we see with the COVID 19 vaccine. And that's for different reasons. I mean, there's multiple circulating strains. It mutates faster

things like that that affect its efficacy. But there are so many people that have this narrative of I got the vaccine for flu, and I still get sick or I never get the vaccine and I never get sick.

Zakiya: And this is really interesting. You know, we talked about this in our vaccine episode Prtect Ya Neck Lab 004 about one of my friends who's a virologist who told me he would not go to dinner with me until I had my flu vaccine and we went right over to the RiteAid I got a flu vaccine, and then we walked back into town for dinner.

Titi: You need more friends like that. We all need more friends like that.

Zakiya: More friends ike Greg.

Titi: Shout out to Greg.

Zakiya: And it does feel like there have been a lot more people talking about flu shots this year.

Titi: Yeah, I think people feel a lot more comfortable with getting a flu shot now that we've been in this pandemic and been away from people and masking and social distancing. I think that the folks that were not likely to get a flu vaccine are now a lot more likely to get it.

Dr. Christine Daniels: You also have people from these very privileged backgrounds who had promoted this idea that they don't need to vaccinate their children because they don't know what's in it, because it only autism. There's all of these false narratives and myths and misconceptions about vaccines that also creates opposition.

Zakiya: Another point Christie made is that when it comes to this anti-vax narrative, we really need to pay attention to the cultural context because some people are quick to be labeled as anti-vax, while others have the luxury of being labeled curious, and it's way more complicated than that.

Dr. Christine Daniels: I just don't like the vaccine hesitancy narrative. I just think it's inherently problematic. It's an oversimplification of legitimate concerns that are based in history and evidence. I hate that that narrative is attributed to people who ask questions when there are certain race or a particular group. When white people ask questions, it's, oh, you know, they just want to be more informed by black ask questions like, Oh, they're hesitant, and they apply it to all vaccines. And I just think it's really problematic and it's not true.

Titi: There's a lot of nuance there that's important to recognize. And when it comes to approaching those curious about vaccines, it's really important to meet people where they are and do so on a case by case basis.

Zakiya: So how do we do that? What can scientists, doctors and educators do to help more people understand what goes into the vaccine?

Dr. Christine Daniels: If we want people to take the vaccine, as scientists, we need to do a better job of removing the veil between the public and the science. The public pays our salaries.

They pay for the science. The taxpayers fund this research. And so I feel that they are entitled to the information of what happens with those funds. And so as scientists, I think we don't do a good job of coming forward and saying what we're doing or what the story is as scientists. Our job is to present data to get data, explore questions, determine answers in an accurate and reproducible way. And so if we want that to be conveyed, then we, as scientists, have to be the people communicating that information in the way that we want it to be received.

Zakiya: And that's true for HIV. But it's also going to be true for some other great developments we've seen with the malaria vaccine.

Titi: Yes, that is huge. Malaria is a disease that's transmitted through mosquitoes, and it has been really devastating in a lot of different countries. And so a malaria vaccine has now been approved. This is going to change the lives of so many people.

Zakiya: And this is also going to be important not just for malaria globally, but also for the dengue vaccine Dengvaxia, which was approved by the FDA in 2019 and has some updates to its use in June 2021

Titi: I love that we separated this into two parts because it really helped us to be able to explore all of the contextual social aspects of the HIV vaccine and the history of HIV in this country, I learned so, so much.

Zakiya: And I think is a great example. It would not be accurate, fair anything to tell this story that's only about glycoproteins and only about the latest platform for designing small nanoparticles. That's not the full story. You know, I think it's only right to say that the identity of the groups affected influenced the response, influence how much funding gets put towards prevention and public health efforts. I love how Christine mentioned religion and how societal values at a specific time can influence the urgency that's considered when we see people dying and we see that right now. I've seen a lot of conversation around whether or not it matters about who's going to the hospital if they're not vaccinated. We want everybody to live, OK? And so I think it's just like a slippery slope. Like you said, you have to know your history or else you're bound to repeat it. And I know human evolution is not happening that fast. OK, we are the same people in 1980 as we are in 2020.

Titi: Yes.

Zakiya: Don't fool yourself. But I do love the increased awareness. You know, we're seeing more conversations. We're seeing more efforts. You know, you mentioned some of the things you see on TV celebrities using their platforms. We talked about movies. You know, I say Philadelphia, but I don't know if it still holds up. That was in the 90s.

Titi: Right? But there are some really great TV shows that are out right now that center around people who are living with HIV.

Zakiya: So there is Pose. And then I think I mentioned earlier, it's a Sin, which is a historical perspective taking us back to the 80s with the hairspray and the acid wash jeans. But from a the lens of a different country and we really get to see how geography plays a role.

Titi: And then another great thing is that Dr. Daniels gave us some book recommendations if you want to learn more and we're going to have that in the show notes. So make sure you head over to DopeLabspodcast.com to look at those because I am definitely adding all of those books to my list of books that I'm going to be reading. All right, it's time for one thing. Zakiya, what's your one thing?

Zakiya: My one thing this week is Ground Truth, which is a newsletter from Dr. Eric Topol. He's a physician but does a lot of translational medicine, and I am loving it. Is Eric Topol. So erictopol.Substack.com, it's COVID updates. I really like it because it's straight off the press. He's a scientist. He's looking at some of the latest stuff from other scientists, and he's just telling it like it is. Yes, pay attention to this or no, we have to take this with a grain of salt. Like, is our Omicron ominous, you know, like, it's just really breaking it down their charts and graphs, you know, I love that.

Titi: Yes, my one thing this week is masterclass. So I feel like everybody has seen an ad for Masterclass at some point with, you know, some of their favorite directors or writers. And so I took the plunge and actually got a subscription to Masterclass. So it's kind of an app, but you can log in on your desktop and they have masterclasses for everything from, you know, people who have been leading in their field. So on wilderness survival, filmmaking, athletes Steph Curry has done a masterclass, real estate, graphic design, gardening, barbecue. And their long because they separated into segments and it's really well put together and it's not just some random person who is interested in writing and doing television. They have Issa Rae doing a masterclass.

Zakiya: Right What's been your favorite one so far?

Titi: Definitely the one with Issa Rae. She's so funny and she gives insight into how she does a lot of things and like how things started in the way that she's able to develop a story and develop characters and how she mines in her real life, for character plots and things like that. So it was really, really good. Yeah, they got Samuel L. Jackson on there. They got Gordon Ramsay on there, Alicia Keys. And another thing that I really love about Masterclass, so you can go to Masterclass.com to check that out is that you can give it as a gift. So if you have a friend that's really interested in gardening, oe really interested in spices, or really interested in cocktails, like my friend, you can take that one masterclass and you can send it to them, and it's such a good gift. I did that for Jimmy. I sent him a barbecue, one for I think it was his birthday last year and it's so fun and it's such a great, thoughtful gift. So masterclass.com

Zakiya: Was that a gift for Jimmy or a gift for you? Because I know how you like barbecue?

Titi: It was a gift for me. Because guess what, I got ribs that weekend. Fresh off the grill.

Zakiya: That's it for lab 043. What did you think? Call us at 202-567-7028 and let us know.

Titi: And don't forget there's so much more to for you to dig into on our website. There'll be a cheat sheet for today's lab, additional links and resources in the show notes. Plus, you can sign up for our newsletter. Check it out at DopeLabspodcast.Com! Special thanks to our amazing guest expert for this two part series Dr. Christine Daniels.

Titi: Dope Labs is a Spotify original production from Mega Ohm Media Group.

Zakiya: Our Producers are Jenny Radelet Mast and Lydia Smith of Wave Runner Studios

Titi: Editing and sound designed by Rob Smierciak.

Zakiya: Mixing by Hannis Brown.

Titi: Original music composed and produced by Taka Yasuzawa and Alex Sugiura

Zakiya: From Spotify our executive producer is Gina Delvac and creative producers are Barron Farmer and Candace Manriquez Wrenn

Titi: Special thanks to Shirley Ramos, Yasmeen Afifi, Kimu Elolia, Teal Kratky and Brian Marquis.

Zakiya: Executive producers from MegaOhm media group, are us

Titi: Titi Shodiya

Zakiya: and Zakiya Whatley.

Zakiya: Do yall remember that not so big like Apple and Starbucks, and Bono was.

Titi: Bon jovi? Oh Bono.

See you can tell I'm like Bono was on a ...

Titi: Same thing and the same person who is Bono who is Bon Jovi? I don't know.

Zakiya: They're all red hot chili peppers, Titi, come on.

Titi: It's all Bruce Springsteen, you know?