

Interview with Kathryn Tayo Hall, 27 July 2018,  
Equal Access Oral History Project

JOAN ILACQUA: All right, this is Joan Ilacqua, and I'm here with Dr. Kathryn Tayo Hall, today is July 27<sup>th</sup>, 2018, we're doing an oral history for the Equal Access Oral History Project. Dr. Hall, do I have your permission to record?

KATHRYN TAYO HALL: Yes, you do.

JI: Awesome. So my first question is, should be easy. It's just background. If you could just tell me a bit about yourself, and where you grew up.

KTH: I grew up in Jamaica, in the West Indies. And I was there, I was born in England, and then my parents were, my dad was in school, and then we -- they were Jamaicans, or are Jamaicans, and so I grew up there until I was 16, and then my dad got a job with the United Nations in Brazil, and they gave me an option to stay in Jamaica, finish high school, go to college, or go to Brazil. And of course, I picked going to college in America, in the U.S. And so, I went to college at 16 and never went home.

JI: Wow. Where'd you go to college?

KTH: University of Miami. Yeah.

JI: What did you study there?

KTH: I studied biochemistry, and I had a minor in chemistry, and it's amazing to this day, how much I use what I learned in college. It's, it hasn't gotten old. And it's interesting, because even like today, I'm still understanding like, layers and layers of the significance of what we were learning in college.

JI: Yeah. So when you went to college, did you have science in mind? Did you go specifically for science, or was that --

KTH: Oh yeah. Yeah. I was one of the kids in, you know, in my high school that was the science geek, I spent lunch break in the physics lab. (laughter) With the, or in the bio lab, or with the -- we had monkeys at our high school, which was cool and interesting. So I was always headed to do science, and doing biochemistry, I thought, was a good way to kind of bring everything together that I liked. And yeah, you know, I'm all -- I've always been kind of primarily a scientist with an artist/other interests.

JI: Yeah. So did you, once you finished college, and if you don't mind, what year did you finish college?

KTH: Great question, wow, '85.

JI: OK. What did you do next?

KTH: I got a job at Baxter Healthcare Corporation in Miami, and my job was to actually make rabbit brain powder, and then turn that into a protein called tissue factor. And tissue

factor was a blood clotting reagent that Baxter used in a test for prothrombin times. And it turned out that the company was having, it was like a \$6.6 million project, which you know, back then was a lot of money, I guess it's still a lot of money now. But they couldn't make it reproducibly in the times, the normal times. So when you test normal blood, it kept creeping up. So it wasn't stable. And nobody wanted to do this job, because you had to A, go into an explosion-proof room, and use acetone to extract the tissue factor from the rabbit brains. And that meant that if the room blew up, because you were using acetone and the blender, you would blow up, but not everybody else. So nobody was into that, but I was pretty young, and I thought that that will get me out of making reagents, which was terribly boring. And it turned out that we, I solved the problem of this reagent, and rapidly got promoted, and got, you know, a really good recommendation from the scientists that I work with, and ended up getting into, you know, Harvard for grad school.

J1: Yeah. And so, had, I mean so the Harvard question is, you know, how did you end up in Boston from Miami.

KTH: Yeah.

J1: Did you want to come specifically to Harvard? Did you apply to other places?

KTH: I, in my, you know, kind of young logic, I figured 10 schools would be good. And I applied to schools all across the country, and you know, I did a broad spectrum. From University of Miami, my alma mater, to you know, yeah, Berkeley, Johns Hopkins, like everywhere. I just, you know, top schools, and you know, the classic combo.

JI: Yeah.

KTH: Reach, safety. (laughter)

JI: And so, when you came to HMS, can you tell me a bit about what you were studying, who you were working with, that sort of thing?

KTH: Yeah, when I came to HMS, firstly I had a huge culture shock. Because I had never been, I'd never seen [05:00] winter. And the only time I remember seeing anything that came close to winter was for the rabbit brain project, when I was at Baxter, we had to fly out to Pel-Freez in Rogers, Arkansas. And so I was this like, very young, you know, scientist, going up to train people at this rabbit farm on how to make rabbit brain powder, using this methodology that I had developed. And I remember the morning driving out with the chemical engineer that I was working with, and it was so cold, there was a frost on the grass. And I'd never seen that, and so he pulled over on the highway, and I got out, and I looked at this, you know, these frozen

droplets on the grass. So that was my first experience, but coming here was a whole other level of cold. And so, that was probably one of the, you know, it kind of soon sunk in that my jeans and, you know, thin clothing was not going to cut it in the Boston winter. So, coming here though, I worked with a couple different people before settling. I worked with [Ben Neal?], and with, oh, Neal, what was his name, Cohen? Ben Cohen. And then I settled on David Weaver, and my job, my thesis was to identify the gene involved in severe combined immune deficiency in mice. Which I think was a very ambitious project at the time. But I learned a lot, a whole lot. And my vision of, you know, making large-scale production of proteins was that I would be able to understand this through cloning and characterizing this [theme?]. And so, my goal was to get to industry, so I could, you know, make a company to employ Jamaicans, and we would, you know, become self-sufficient in this pharma industry in Jamaica. I hadn't, I didn't know so much about politics, and government, and you know, regulations, and a lot about just, you know, these powers that move behind the scenes to control where things are made, and who purchases what. It was a rude awakening when it came down to OK, let's do this. Because we had the knowhow to do it. So that was, I think, a disappointment.

But I think throughout graduate school, I realized that I loved graduate school, and I loved research. And so I think my, when I left industry, and I took a couple of years off to do some interesting things, but when I came back, I was in, I came back fully, you know, engaged in just research for the sake of answering important scientific questions.

JI: So while you were here at Harvard, were you involved with any groups or clubs, or anything like that? Or were you super focused on the academics?

KTH: I was one of the founding members of MBSH, which is Minority Biomedical Scientists of Harvard. And I remember we, I was struck by several things. Like so for instance, we would get requests from time to time to go out and judge, be like science judges at high schools, you know, like underrepresented minority high schools, that kind of thing. And some of the students and postdocs at the time, it was very interesting, said you know, I don't see why I should take time away from my work to do that. Because I think, you know, people -- the response varied from like, you know, I got here on my own, to I don't have time to do that, I'm really busy, to of course, we have to do this, we have to give back in some way, because we got, you know, we have the privilege of being here, we should extend it. I

was on the "we have the privilege of being here, and we should bring others and extend it" side. And so, in that process, we decided to form this group. I mean for other reasons as well, but it seemed that we should have MBSH to kind of channel, and discuss, and organize around all these things. And it was interesting, because we debated calling it like, the Harold Amos Society, but people thought that that wouldn't stand the test of time. I think we could have called it the Harold Amos, I was also in the camp of calling it the Harold Amos Society, but we called it MBSH. And they're still here today, and they're doing really great work. And I think that was the main organization, there were, on the main campus, there were several events, there was a [10:00] Du Bois Society, and I remember going to a couple of their events. And then there was the biomedical sciences careers program, Joan Reed's program. So I was active as a mentee, and then became a mentor throughout the years that I worked with, have been here. And then there was another organization called the New England -- it was called [NEBI?], New England Biomedical Society. And they were more out of MIT. And I was also part of that organization, first as a mentee, and then as a mentor. But they got, I think, disbanded at some point, and what was left of it became part of [BSCP?].

JJ: And I mean, you kind of talked a bit about mentors. Were there any, you know, are there any moments while you were here that stand out to you as, you know, like catalysts, or turning points, or big moments that you'd want to talk about?

KTH: You know, it's interesting. Because I'm, I love experiments and controls. And this is not a purely well controlled experiment, but I was here in two different, at two different times. So I have this interesting comparison, I mean it's confounded by the fact that I was more senior when I came back, although I wasn't as senior as I thought I would be coming back from industry. But, I think the difference between when I was here the first time and when I was here the second time was the types of mentors that I had made a very big difference. So when I was here the first time, like as a graduate student, there were really no, I mean apart from Joan Reed, I didn't -- and Dr. Amos, who retired soon after I was here, there weren't a lot of faculty of color. And I remember after Dr. Amos retired, two meetings in particular. In the first meeting, they called all us graduate students together, I think there were about five of us in my class. And they said, they showed us a graph, (laughter) and on it, it showed the enrollment, the PhD enrollment, like over the

last, you know, 5 to 10 years. And they show it going up, up, up, up, up, and then it just plummets down. And they asked us if we had any idea why it would have plummeted down. And of course, it was exactly the year when Dr. Amos retired. And it was so obvious to us, we just kind of looked at each other like, are you kidding me? Like it's so -- like, come on, this is -- the man really advocated for, you know, promoted, recruited minorities, and he's gone, and nobody is here to do that. And so, that was one kind of striking experience, I think, around mentorship broadly. And then the second one was, so a couple, like I think maybe a year later, we had another, the same kind of meeting, and they said, (laughter) they said to us, "Well we heard what you said, that you know, more mentors from, you know, minority represent" -- more minority mentors would be great. And they said, well, and especially the women, there weren't a lot of us, we said like we want some women of color mentors. And they literally said to us, in this meeting, "We don't have any women of color mentors for you. Would you prefer a white woman mentor, or a black male mentor?" Like, somehow they're kind of equivalent, because they're not a black woman, but they're either a woman, or they're black. Would that be enough for you? Like, which would you prefer? And it was such a bizarre

question to us that we just, it was just, I think, epitomized the disconnect in kind of understanding what, why you would want somebody who looks like you, who may have had similar experiences to you, who might be able to empathize more with your position, not half of your position, or your, you know, your experiences. So, and yet you could see that they were doing their best. Because that's the best they had to offer. So I think those are the kinds of things that stuck out to me, as I kind of went on.

J1: Yeah. And you mentioned that you, you know, later on, you had become a mentor to other people, do you think about those interactions when you are acting as a mentor now?

KTH: No, I don't. Because I think when you're -- mentoring is such a, [15:00] it's like personalized medicine, or precision medicine. You know, like you really have to understand who is in front of you, what are they looking for, where have they come from, what are they able to do, and what do they want to do? And what have they not thought of? How can you inspire them? How can you help them get to where they want to go? So, I think that, and I mentor a lot of different types of people. And you know, the whole spectrum. Like who, I basically mentor, you know, people who come to me, I have never turned someone

away. Because I understand how valuable and how strong mentorship can be in somebody's life, because I've been -- there have been times when I've had amazing mentors, and times when there was a paucity of mentorship. So yeah, I don't think about that too much. I just think about like, what -- and then, you know, the flipside, I just, you know, describing all the parameters that you look at for the mentee, but then for me, like what can I do for you? Like what do I know? You know, like what am I interested in? You know, am I being biased when I say this? Like I might have, I have, you have to be aware of your own biases, right? Because you could easily kind of steer somebody down your path to do the thing that you want them to do, so they, you know, they can kind of like help you get that paper done, or do that thing. And you have to always remember that mentorship is, even though it's a partnership, it always should favor the mentee, and not the mentor.

JJ: So, I have another, you know, sort of broad question. But, so you've been, I would say, at and around HMS for close to 30 years, if my math is --

KTH: Yeah, yeah.

JJ: -- I'm a historian, so my math's a little rusty. You know, what are the biggest changes you've seen in regards to

diversity here, and the ways that we think about it and talk about it, and act?

KTH: Yeah. Well there's certainly a lot more of it. (laughter) There are a lot more people of color around, whether they're students, postdocs, graduate students, faculty. But it's striking that there's not, there's still not that many. It's kind of like, you know, just, there's like, there's a cap or something, I don't know, it just, it never seems to go past a certain point. I think that there's still, and maybe it's a little bit better, but there's still an ability, an inability for people to see people of color. And it's fascinating. It's fascinating on one level, it's annoying and kind of painful on another level, that people don't see, I think a lot of non, you know, like minority -- majority people will literally not see you. Literally not see you. So I'll give you a really classic example. I was invited to give a talk over at the School of Public Health. Not by the School of Public Health, people [I taught?] just happened to be there. And the woman who invited me, you know, I never met her. And she said, you know, I'll meet you outside the classroom, G-1. So, at you know, 11:00 a.m. So I get there at 11:00 a.m., and I see people looking around for somebody, there were like, two different people looking around for somebody.

And they're looking, and looking, and looking. And so I get there, and so part of me, I'm kind of like, you know, interested in human interactions. So I wonder, is one of them the person I'm supposed to meet? And, but they're not seeing me standing around, looking for somebody, too. And I'm thinking like, I wonder how long they're going to not see that there's somebody who's, you know, obviously, it could be me, they could ask me if it's me. And they literally like, don't, they literally like look over my head, right? They edit me out of their vision. It's fantastic to watch this in real life. So finally, I go up to one of them, and I say, "Excuse me," and the woman looks at me like, a little bit annoyed, like you know, like you can see her focus comes in, and she looks at me, she goes, "Yeah?" And I go, "Are you," the name of the person, and then she kind of looks like, and I said, "Hi, I'm Kathryn Hall." And then you could see the like click, like oh my God. And then she kind of like, performed the way you would greet somebody when you are greeting somebody coming for a talk. So that's classic. Another classic thing is like, if I'm at a lecture, you know, like I'll go up to the speaker after, and oftentimes, if the speaker is a tall white male, I'm not, you know, a super tall person by any means, (laughter) it's like they can't even see you, they

talk to all these other people, and then they kind of like, you know, think you're going to take the mic [20:00] off of them or something. I mean it just happens, I can like, probably spend an hour of like, examples of these, like people don't see you questions. You know, I could tell you about the man who when we, you know, we were the winners of a research competition recently at my hospital, and you know, that we had, there were 10 of us, and we were all setting up our talks for this big research day. And this guy who was beside me said, "Can you set my mic up for me?" And I said to him, "What is it about me that makes you think that I can set your mic up for you?" And he literally turned and walked away. Like he couldn't answer. Another, and this is the last one I'll give you. So, I was going to sign up, you know, I had registered for a conference here, and in line, and the person is checking me in, and they say to me, "Are you signing in for somebody else?" And I say to them, "What is it about me that makes you think I'm signing in for someone else?" And I ask this question really, 90% from curiosity, I know this doesn't add up to 100, 20% from like, I'm a little pissed, you know? And then 10% (laughter) from like, you know, like I really need you to think about this. I want you to think about this, and really kind of examine this for yourself,

and maybe this will give you some pause next time you make an assumption. Because I understand how people make assumptions. It's not like, it's not a majority identity condition, it's a human condition. We're always, to me, trying to determine is this person predator or prey? Because, you know, it's very atavistic, right? It's like, am I safe? Am I the predator, or am I the prey? So like, that's the kind of experiences that are still very much here, and they're not unique to this institution, they're just unique to life in, I think in the world. I would like to say it's this country, but it's actually writ large across the world.

JI: I'm not surprised, based on what other people have talked about --

KTH: Yeah.

JI: -- here, and I think there's, I don't know, I'm heartened by the focus on, there's a lot of like, diversity task forces (overlapping dialogue; inaudible) bias training they're trying to do here. And I'm curious to see if that makes any changes.

KTH: Yeah.

JI: Because we can't really talk to if it's going to, it's hard to think about the future. But it's, that's one of those things where as much as things change --

KTH: Yeah.

JI: -- there's things that stay the same, and there's always work to be done with them. I'm kind of, I'm curious too, I mean, and this might sound like a throwaway question, but like, what can we do better here, do you think?

KTH: You know, there's nothing like getting to know other people. And you know, people say the word diversity, and in that word, I think we miss the fundamental essence of that, which is, it is about getting to know more people who are not like you. And that goes for me too. You know, because let he or she who is without sin cast the first stone. We all have biases, right? And I feel like it's the familiarity that allows people to kind of change their filters. This is biological stuff. Do you know, this is not because these people are bad, and these people are good. Or these people are like, you know, dominant and these people are like, you know, victims. It is, we're wired to make these assessments. And so you really have to kind of break the wiring by giving people positive interactions, or more interactions. It's, and so, I think that's the thing to do, and all these trainings and so on happen in the context of trainings, they don't happen in the context of real life. I mean I think the only way to really change real life is to kind of have more people

mixing about. And that is not easily done, and we start at very high levels, and I think we have to really fill the pipeline at a really, you know, from a really young age. Because people get, you know, they just get sidetracked. And I'm talking about everybody gets sidetracked, it's not just, you know, people of color. So, yeah. It's a [25:00] complicated problem, but I think having, this is, for instance, a really good idea, because people might see other people, you know, like oh, this person actually speaks. (laughter) This person actually has a, you know, something to say. We'll see.

JI: And that's part of the hope of this project is that people will be able to interact with it.

KTH: Yeah. Yeah.

JI: And to hear (overlapping dialogue; inaudible) whether they're similar or different than what their own experiences have been.

KTH: Yeah.

JI: My -- I have two more questions.

KTH: Yeah.

JI: And my second to last question is just, you know, will you tell me briefly what you've been up to since -- I mean, you've been here for a while. (laughter)

KTH: Yeah, yeah.

JI: But you know, just generally, after you graduated, what do you do now?

KTH: Yeah. So when I finished, when I graduated from grad school and went to pharma industry, I was there for about seven years, and I learned a lot about how to make a pharma company. I loved it. And then I had an option to, our company was getting bought out, and I had an option to like, cash out my stock options, which is one of the benefits of being in pharma. (laughter) You don't get that here in academia. And I thought wow, why don't I do that, and do all the things I've ever wanted to do? And I made a list of the things that I always wanted to do in life, and they were, I always wanted to be a filmmaker, make a, you know, a film. I always wanted to renovate a house. I always wanted to write a book. I always wanted to have my own business. And I always wanted, I was very curious about like, other forms of medicine, and other kind of spiritual traditions. And so, I made this list, and cashed out my stocks, and went to film school, made documentaries, I made a documentary on HIV, AIDS, and that's when I met Dr. Stone, because she's a, she was one of the leaders in HIV treatment and research back then, and now. And then, I also, I renovated my kitchen, which was way enough to say like OK, check, don't need to do that. (laughter) I wrote

a short story, and that was enough to say I need to spend more time on that, I'll come back to the book at another time. I started a film company with a friend of mine, and we basically went around with cameras and sound equipment on our backs, and interviewed people about social justice issues. And we got hired by like, *Ms.* magazine and some really great companies, to do some really cool, you know, kind of informational pieces on people doing work anywhere from domestic violence, to child abuse protections, to gentrification in Chinatown in New York. So I got to see a little bit of America. We went to Ohio, and I saw kind of what was going on in the Rust Belt. It was really heartbreaking stuff. And at one point, Valerie said to me -- so I did that, and then I studied some, you know, spiritual traditions, which was really cool. I studied with an African shaman named [Maladoma Sume?]. I learned about energy medicine. And I was really fascinated then by like, placebo responses. Because I'd known them from industry as kind of like, the bane of our existence. But here was something else where people were just kind of getting better with these non-pharmacological interventions. So I was very fascinated by that. And then, Valerie said to me like, well why don't you go back to research? You love research. And I was like, no, I

can't. You know? I am an artist, or you know, this kind of thing. So finally, I was like you know what? I should, I met Ted Kaptchuk, and he wanted to identify genes associated with placebo response, and that somehow brought my whole world together. And so, I came back, and I worked with Ted on a couple projects. And then he encouraged me to join the research fellowship in integrated medicine, the Harvard-wide research fellowship in integrated medicine, so I did that at BIDMC. And absolutely loved it. I was very excited about the projects that I was on. And what happened was really cool, where the genes that we identified associated with placebo response, when we tested them in large clinical trials like the women's health study, we found that they also modified risk of cancer, and cardiovascular disease. And that there were several drugs that interacted with them. And a lot of these drugs were over the counter supplements, and aspirin. And so, I became very interested in this kind of [30:00] intersection between disease, drug, and inert interventions in genes. And so, that's essentially pharmacogenomics, and so that's what I work on now is the pharmacogenomics of cardiovascular disease, cancer, and supplements, and aspirin. And you know, it's interesting because, and going back to my roots, kind of where this all starts, which is,

you know, like wanting to have a pharma company that we, you know, like gives people jobs, and does important work, I was pitching to one of our patent people in our hospital, like why don't we, we could patent this kind of effect modification by these genes, on these drugs. And they're like, you know, no, I don't think anybody is interested in that, because these are over the counter medicines, and you know, they -- anybody can just go and buy them. And then it struck me, like what, if we could identify people who might benefit in terms of cancer, or cardiovascular disease prevention, by taking these supplements and aspirin, and we can prove it, why should I care if a pharma company's interested in underwriting it. That's like, that's to me the Holy Grail. Like we could, we don't have to do this the old fashioned way, like have a patent, and build a company around the patent. We can just like, open the doors of, you know, CVS and Whole Foods, you know, your -- that special aisle you go down, and you see all those, what's that aisle called? The --

JJ: It's like the supplement aisle.

KTH: The supplement aisle, yeah. And just, people can 23 & Me their genotypes, and know what to take off the shelf. So I think that's a really interesting approach to what one outcome -- that's one potential outcome from some of my

work. But that's what I focus on, is kind of the pharmacogenomics of active and inactive drugs.

JI: That's awesome. (laughter)

KTH: Cool. (laughter)

JI: So my very last question is probably the most open ended. Is there anything else you want to share?

KTH: You know, I think this is an amazing, amazing institution, and it's so rich, and it's so dense, and it's so huge, it's hard to get a full appreciation of it. You know, it's kind of like, I don't even know what to describe it as. But I mean, as I look around, you know, like who could ever read all these, all the wisdom, and all the kind of fascinating things in all these books? And who could ever kind of unwrap the story of all these, you know, like wax models that you have here, all the microscopes, there's just so much. And I think it's really important that you're hearing, I think it's wonderful, from all these different people, you know, about their experiences. I would actually think that it might be interesting to interview one or two non-minority people, to kind of, you know, like what are they seeing? Do you know? Like, do they even -- what is their experience of minorities at Harvard? You know, because it's an interaction, it's kind of like what I work on is these intersections where all these things come

together, and we can't solve them, or understand them by studying one thing. We have to study across things, and I think it's cool what you're doing. Yeah.

JI: Thank you.

KTH: Yeah.

JI: And thank you for taking the time to chat with me today.

KTH: Sure, absolutely. My pleasure, yeah. Good luck with everything.

JI: (laughter) Great, thank you. Here, I'm going to turn --

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