Unabridged Interview of Jay Bhattacharya

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Josh: First of all, thanks for sitting down with me. I wanted to ask about your journey to faith. You were raised Hindu and became a Christian in high school. Can you tell us more about how that happened? Why did you become a Christian? And how did your family respond? That's not always an easy conversation.

Jay: Actually, it was the other way around. My family was Hindu—Brahmin Bengalis—but we came to the U.S. when I was four. When I was 13, my dad had a heart attack. There was a local church with someone who had a heart for immigrant communities—a woman named Maureen Bryan who reached out to my mom, offered to help. That was a big help when my dad was in the hospital. After he got out, my parents started going to church. They dragged me and my brother along. I was mystified—math and science felt closer to my faith than Hinduism did, and I didn't understand Christianity. It didn't make sense to me

At some point, my parents and brother accepted Christ, but I couldn't. I didn't see how faith was compatible with science. Then, when I was 18, I had this experience—a sense that I had made an idol out of science.

It was poisoning the way I thought and interacted with people. I was judging people based on how smart they were, how good they were at math, science, and other things. It was this sense, and it came out of nowhere—actually, I know where it came from: it came from God. Because I do not know where else it could have come from, a sense of shame that I was thinking about people the wrong way. It was a great evil. It was really pride, and that is the day I accepted Christ.

It was a real meeting with him, where I was convicted for my own pride that I'd made an idol out of my how smart I was.

I thought, "What have I done? What is this faith I've stepped into?" It was easy to talk to my parents about it—they were happy, since they had accepted Christ earlier. I went to college, joined, this Bible, like some Bible studies, trying to understand what the Christian faith was all about. Spent a lot of time in grad school, with these Bible studies with some close friends of mine where we had argued about every single page of the Bible together over the course of years.

[1] https://www.christianitytoday.com/2025/06/nih-director-jay-bhattacharya-trump-covid-health-medicine/?utm_medium=widgetsocial

After finishing my training, we moved to Southern California, and I joined Santa Monica Presbyterian Church. Later, in 2001, we moved to Stanford, where I became a member of Mountain View First Presbyterian. They asked me to be an elder—at first, I thought, "Are you sure I'm old enough?" I led Bible studies there for a long while, and my kids were baptized there.

And that they asked me to be an elder, I was like, are you sure I'm old enough? This is, you know I led Bible studies there for a long while, and my kids were baptized there, just, you know

I've been learning about, doing a lot of reading, basically now for most of my life about what it means to be a Christian, the Bible, of course, but also how other people who've had that same struggle between faith and, and science, how they've thought about things.

Josh: And how do you answer the question, what does it mean to be a Christian?

Jay: What it means to be a Christian is to give up your own life for the love of others, because you are so grateful that Christ gave up His life for you.

Josh: In your think, who have been the most helpful people?

As for helpful people—ironically, Francis Collins was helpful. His book *The Language of God* and his example of balancing faith and science were important to me when I was younger. There are also countless quiet examples—people who have given up their lives in response to the call of faith. They're not necessarily famous, but they've been significant.

John Lennox, the Oxford mathematician, also comes to mind. I've read a lot about Aquinas too—modern interpretations of his work have helped me see that scientists often have a cramped metaphysics. There are other ways of thinking that are worth considering.

Some of the old too, like Aquinas and the more modern interpretations of Aquinas have helped. There's a metaphysics to thinking about science, and the metaphysics that scientists have is crimped. The idea that there are other metaphysics available, that are worth thinking about. For example, can you use scientific evidence to prove that science itself is true? The answer is no, you cannot.

Joshua: It's circular reasoning at some level.

Jay: Ultimately, you must make decisions about what is what is the ground truth of reality, on which base, how do you decide what is the ground truth of reality? And, if the idea is that the material world is all there is, I don't know, it leaves me with all kinds of holes, fundamental things about how I ought to live my life.

The Christian story answers those holes. It tells me why that sacrifice of myself for others is good, good for not just for me, but for in line with how the universe is really structured and also for it's just a good thing. Why love is necessary. Why love is the center of the universe? That's something that a

worldview that says that the material world is all there is, well, it doesn't help you answer any of those questions.

Josh: Let's pivot so we have time for more questions. Briefly, what kind of Christian would you say you are now? Evangelical, Protestant, part of a particular tradition?

Jay: I'm Presbyterian, but I'm not dogmatic about it. I've read Calvin, but I wouldn't say I'm a Calvinist.

Josh: You alluded that "ironically" Collins's work has been helpful to you, but you've also been a public critic of his. Can you explain briefly what your main disagreements with him have been, and what you would have done differently in his position—the position you now hold?

Jay: The primary disagreement was how to manage the pandemic. In October 2020, I wrote the Great Barrington Declaration arguing we should account for the collateral harms of lockdown policy. The harm that the school closures were doing to children. The harm that the economic dislocation caused by the lockdowns were doing to the world's poor. The UN estimated that about 100 million people would face starvation due to lockdown-induced economic dislocations caused by the lockdown in April 2020.

We recommended protecting elderly people who were really at high risk from the disease, much better than we had been, while not disrupting so much the lives of the less vulnerable populations. Because those disruptions were going to cause more harm to them than COVID, This, by way, has been come to be true.

Look at how Sweden did during the pandemic, they have lower all cause excess deaths than basically every other nation in the world throughout the pandemic, much lower than the United States, and they didn't follow the lockdown. They kept their schools open. Kids have no learning loss. Their levels of suicidality and depression did not skyrocket. They don't have the same increase in drug-abuse overdoses, that we have.

Josh: I'll slow you down there. We could go down this path for hours—it's fascinating. Maybe we can do a follow-up interview. I came across a sermon you gave in February 2022 at your church in Northern California. You spoke about how Christians should respond to one another during the COVID-19 pandemic—how we should respond as Christians, but really how everyone should respond. It struck me as very different from some other messages at the time. Can you summarize your message?

Jay: The ideology of the lockdowns was that we are all merely biohazards, and we should treat each other as such. That is fundamentally at odds with how Christians view our fellow human beings. For Christians, we view each other as the focus of the love of God. Each of us made in the image of God, that we're not mere biohazards. We may be biohazards, but not mere biohazards, and we should treat each other in self-sacrificial ways, even our enemies, we should forgive

The ideology of the lockdown is that we are biological dangers to one another, and we should structure our reaction to other people, our relations with other people, around that one idea. It strikes me as fundamentally at odds with how Christians to ought to behave and think about other f fellow human beings.

Josh: In your sermon, you contrasted Jesus's response to lepers with Elisha's. Can you explain this more?

Jay: He is a visited by the Syrian general, Naiman, who has leprosy, or some disease like leprosy. Elisha won't physically see him. Instead, Elisha sends out a messenger, "Go jump in the Jordan, jump in the Jordan, you'll be cleansed. Naiman responded, "Wait, what is this? Why can't I go jump into Syrian river? Syrian rivers are better than rivers and Israel, what is this guy telling me?" One of his slaves, this girl who's a Jew, tells him, "Well, look, you came all this way to get his advice, you may as well just do it."

So, he says, "Okay, I'll do it." He jumps in the river, then he's healed. Right? And he's really grateful. He gives goes back and tries to give Elisha money, Elisha says, no. Still, even if this foreign general who's attacking Israel, still nevertheless, he is blessed by God, because he's because he has his faith.

There's lots to that story, but the element of the story I picked up was that Elisha, the prophet does not actually physically touch Naiman when he cures him.

It is in contrast with Matthew. In Matthew, the Jesus encounters a leper, and he physically touches him. If you believe Jesus is God, well, he didn't need too. He's more powerful than Elashi. He didn't need to physically touch him. In fact, we see Jesus healing at a distance and other stories in the Bible. So why did he physically touch him?

One lesson I draw from that is that he meant to send a message that there is no one unclean in the kingdom of heaven. There's no one unclean. We may be biological hazards, but we don't treat each other as mere biological hazards. It's not that we don't take precautions, when that're necessary, when they're deadly biological disease, but at the fundamental core of what we do is we treat each other as human beings, not as mere biohazards.

Josh: Many evangelical Christians have such a great deal of love and respect for Francis Collins, that hearing criticism can be difficult. What would you want Christians to understand about your disagreements with Collins, and about him and about you?

Jay: I still have a deep respect for him. After I wrote the Great Barrington Declaration with Martin Kulldorff and Sunetra Gupta, he wrote an email to Tony Fauci four days later calling for a "devastating takedown" of the premises of the Declaration. They called me, Martin, and Sunetra "fringe epidemiologists," essentially trying to marginalize us. That was an irresponsible use of his power. He's since apologized to me for the use of the word "fringe epidemiology."

Now that I've been in his office a couple of months, I can kind of understand. He must have been under tremendous pressure, and he had his view about how the pandemic ought to be managed. I believe that view was very short-sighted—focused on infection control—but he forgot that most people on Earth do not have the capacity to lock themselves away. The poor do not have that capacity. The kind of policies he was pushing could only be followed by the laptop class. The world's poor do not have that capacity.

There was a seroprevalence study in July 2020 in Mumbai, where 70% of people living in the slums had already had COVID and recovered, while in the richer parts of Mumbai, it was 20%. That class divide shows up in the data everywhere in 2020 and beyond. The world's poor were asked to lock down, but they still got infected and still suffered from the harms of the lockdowns.

Josh: You'd really want Christians to understand that you still have a lot of respect for him, he's apologized to you, and you really wish he had more sensitivity to what the poor were going through in response to the pandemic. Is that a good summary?

Jay: Yeah, the poor, and just a better understanding of the actual consequences of the lockdowns beyond infection control. I don't think they were even very good infection control, but they definitely caused tremendous collateral harms—to children, the poor, and the working class. That's what motivated us in writing the Great Barrington Declaration. We were looking at the data from spring 2020, and it was heartbreaking. It was absolutely shocking to me that the public health establishment—not just in the U.S., but around the world—seemed utterly blind to those harms.

Josh: I think it's fair to say that trust in public health and scientists more broadly has really eroded substantially. This has been a big part of the loss of trust, hasn't it? Now that you're the NIH Director, what are you thinking about how to rebuild that trust?

Jay: You're absolutely right. Trust in public health is at an all-time low—at least in my adult life, maybe in a century. In previous decades, we saw so many successes in public health: addressing the polio epidemic, advances in sanitation and nutrition worldwide, increases in life expectancy—huge successes. But during the pandemic, the public health establishment embraced ideas that were not actually supported by scientific evidence and ignored basic facts about the consequences of the policies they recommended. So yes, it's true: the public has lost trust in public health.

Josh: How can that trust can be rebuilt?

Jay: First, we have to acknowledge that the public has good reasons for that loss of trust. Pretending that the public somehow got things wrong, and that the public health establishment got it right, and the only problem was that the public didn't obey blindly—that attitude guarantees the trust will never come back. We in public health have to acknowledge the errors we made.

Second, we have to get back to fundamental scientific ideas and processes that underlie public health. The kinds of ideas I have for what I'd like to accomplish as NIH Director are designed

around that. For example, I want to make sure we fund research that actually addresses the problems people face. The pandemic is a great opportunity for that. We have a chronic disease crisis that is catastrophic.

Josh: Let me ask you about that a bit. You often emphasize clinical research and its impact on medical practice, and that's true—that's important, and a big part of NIH's mission. But what about basic research? I mean work that advances our understanding of the world but has long-term and uncertain impacts on patient care. Does that kind of science still have a future at NIH?

Jay: Yeah, definitely. Basic research is fundamental to the next generation of advances. It's an essential part of the NIH portfolio. I have no intention of changing that. In fact, I want to make sure we do that—especially the kind that translates into advances in health.

There are parts of the NIH portfolio—though we can debate the exact amount—that were focused on ideological goals. For example, the elimination of racism. The NIH has the capacity to do research that makes people healthier and helps people live longer. But it doesn't have the capacity to address historic wrongs or solve divisions caused by unethical or evil behavior that has lasted centuries. That's not within our capacity. We can't achieve cosmic social justice using the tools of the NIH. We should focus on the things we can actually accomplish.

Josh: Speaking as a scientist for a moment, I think on face-value that could be implemented in a sensible way, but there's a lot of lack of clarity, and in many places, it hasn't been done with a scalpel—it hasn't been well defined. I really do hope there's more clarity brought to that. That's just a comment I probably wasn't going to include in the final print, but I wanted to say it.

Jay: Can I just add something for clarity? The line I want to draw is between science and not science. A scientific project tests a hypothesis that is, in principle, falsifiable. That's Popper's demarcation criterion for science and non-science. You can have a hypothesis that is general but still scientific—it's a question of induction versus deduction.

I'll give you two separate hypotheses, one science, one not science. For example, here's a scientific hypothesis: Redlining—where if you live in a certain area, you get worse credit scores or access to services—reduces access to healthcare and leads to worse health. That's a scientific hypothesis. In principle, it is falsifiable, you can look at data and see if it is. I believe redlining negatively impacts health negatively—that's something testable.

Joshua: Here in St. Louis, that's a real issue.

This is a testable scientific hypothesis that addresses a real problem that minority populations have, and it leads to potential actions to intervene and change. The key thing is, it's a scientific hypothesis.

The NIH remains committed to advancing the health and well-being in minority population. So that's part of what the mission is. The mission is researched and advances the health and longevity of Americans, all including minority America, everyone.

But then there's the hypothesis that structural racism is the root cause of health disparities in America. That's not, in principle, falsifiable. I don't know of any data that could disprove that. It's not a testable hypothesis. That's the distinction I want to make: science versus non-science, research that's not science and doesn't improve anyone's health. The NIH should prioritize research that is falsifiable and testable.

Josh: It really comes down to how it's implemented. But like I said, I don't want to go down that rabbit hole too much. Let's get back to this question of trust. There's a policy or consideration that would make many of the current NIH leadership roles—which are not political appointees—into political appointees. I worry that could further politicize science in the U.S. and substantially erode trust. What are your thoughts on that?

Jay: Well, I'm a political appointee—the head of the NIH has always been a political appointee.

Josh: Yes, but many more could become political appointees.

Jay:, Clear to most people, it's certainly became more clear to me than it ever had been, that science was politicized, pretty fundamentally politicized. During the pandemic it being abundantly clear that that was the case.

I'll give example of this from 2020. After the lockdowns were put in place, there were protests, anti=lockdown protests, that the public health establishment condemned. A friend of mine was arrested in Idaho for organizing outdoors hymn singing in 2020. He was arrested for singing hymn.

Joshua: Then there was the George Floyd protests that happened afterwards, which was just given a pass.

Jay: Well, the public health establishment said it was good for public health to have the protests but not the other protests.

My view is that both protests were reasonable. People had strong ideas about how our political system should react to various events. We have a constitutional right, a First Amendment right, to protest when they have grievances that they want to address. The public health establishment should have treated both of those protests in the same way. So, the politicization of science happened during the pandemic.

Josh: I don't think this politicization was the right direction. But I don't think the right direction would be to make it *more* politicized. To make it *less* politicized. It seems like it would be a better path.

Jay: I will give you examples from before the pandemic. I had colleagues and friends who told me they had to write DEI loyalty oaths to keep their jobs or to get hired. Hiring committees would have a

political watcher—an apparatchik—whose job was to ensure faculty weren't racist in their hiring practices. It wasn't described that way, but that's effectively what it was.

That was before the pandemic. The problem is science has become politicized, used as a political tool. The idea that sort of somehow Republicans or anti-science and Democrats are pro-science, that became a political cudgel. So, science had become politicized even before the pandemic, and the politics of the pandemic just accelerated it.

The question now is: How do we depoliticize it? Ironically, having some level of political control over science, where the political control aims to depoliticize it, might be the only way forward. Can you imagine removing the focus on DEI if you didn't have political control?

Josh: I'm really concerned about the pendulum swinging the other way, in a way that's really concerning to me, is, for example, the discussion on autism and vaccines. I know several scientists who have had grants revoked just because they were not aligned with the desires of your boss, the HHS. And so there's a lot of fear about that in a way that I've never really seen before.

Jay: I guess I can push back on that some, Josh, because from what I've seen, the grants that have been revoked fall into a couple of classes. One is, are you at an institution that violates civil rights laws? Like Harvard or Columbia, discriminating against Jews, discriminating against Asians—that kind of thing. The other class is grants in de-prioritized areas. Are you looking at the NIH as a way to achieve social justice in your work, rather than as a scientific question of how to improve health and well-being? Those are the kinds of grants. Now, I mean, there are others, but I think the fair way to do it—well, it seems like you'd be open to me actually explaining more, maybe offline, which I'm happy to do if you are. There are specific cases.

Josh: I don't think it's really fair to press you on that if you don't know the specific ones I'm talking about. We're just going to be talking about generalities here.

Jay: Yeah.

Josh: I do want to ask you about a couple other things. These are, once again, opportunities to clarify. There's an interview you did with *Science* magazine about a month ago. It was nearly right after you started, too, right? Toward the end, *Science* asked you about the possibility of NIH disallowing grants with foreign collaborators, and you said, and this is quoting you: "I'm really comfortable with this conversation because you're actually spreading rumors that you don't know anything about. And *Nature* is also spreading rumors about halting foreign collaborations—that's not true." Yet later that same day, the NIH announced that exact policy. So, can you clarify what happened?

Jay: Sure. The policy was misreported. That reporter was spreading rumors.

Josh: Okay, so what did they get wrong? Explain to me what they got wrong.

Jay: When she interviewed me, we were still in the middle of policy development. There was no policy yet. The policy wasn't to end foreign collaborations. The policy was to change how we track collaborations between our grantees and foreign collaborators. For example, we had a grant that we gave to EcoHealth Alliance before the pandemic. EcoHealth Alliance had a subaward to the Wuhan Institute of Virology. Under the subaward system, the grantee is responsible for auditing where the money is spent. If the NIH wants to see lab notebooks or other research materials, the grantee is supposed to make that happen. We have very little control over the sub-awardees.

So, we moved from a system of subawards to subprojects, where the grantee is no longer responsible for policing or auditing their collaborators. Instead, the collaborators—including foreign collaborators—directly receive their money from the NIH, and the auditing relationship runs through the NIH rather than the grantee.

Josh: You are saying they misreported when they said you were disallowing new subawards to foreign collaborators unless there was a clear reason?

Jay: Yes. What they misreported was that we were ending foreign collaborations. That's a lie. They reported a lie. Now, you can talk about technicalities—a subaward versus a subproject—but the key point is, where is the auditing relationship? Who has control over that: the grantee or the NIH itself?

Josh: Well, just so you know what's happening on the ground—at WashU, where we're a major grantee of the NIH—there are a lot of behind-the-scenes conversations happening with people at the NIH too, about this. We've been advised here not to include foreign collaborators right now because we'll get immediately flagged and not rejected.

Jay: That's misinformation spread by *Science* and *Nature*. That's why I was so testy in that interview with the *Science* reporter. She was reporting misinformation. She ended up reporting a straight-up lie in *Science* magazine about the nature of the policy, and it scares and misinforms scientists all around the country. The goal isn't to end foreign collaborations. I've had foreign collaborations in my own work. The goal is to put those foreign collaborations on a more solid footing, so that a Wuhan situation never happens again.

Josh: Okay. All right. That's helpful to hear.

Josh: Let's talk a little more about the NIH. You described this as a "tough period" for the NIH, which it certainly is. Morale is low. There are major staff reductions, and it's not just with NIH. I think this really expands to anyone who has major funding from the NIH. Really, to anyone doing medical research in the United States. There's been a lot of canceled grants, which we've talked about. There are looming budget cuts. Many of these changes also began before you took the job, too. I'm not laying them all at your feet. Maybe this isn't exactly how you'd want them to be, but I did want to hear your assessment of all these shifts, and if you think we'll be able to continue to invest in science at the same level. And how do you plan to lead through this period?

Jay: Yeah, well, I mean, I think the President wrote a letter to his science advisor, Michael Kratsios, committing the United States to being the world leader in biomedicine in the 21st century. That's my task, right? Because the NIH is the primary agency of the federal government that will make that happen.

The NIH funds biomedical research at levels that are like an order of magnitude greater than the rest of the world combined. And that will remain true even under the worst projections about the budget.

Josh: Right now, they're asking for 40% cuts.

Jay: The budget is a negotiation between the administration and Congress. Congress has its desires, and ultimately it ends up in negotiation. The key thing for me is to make sure that, whatever the budget ends up being, we spend the money in a way that maintains American leadership in biomedicine in the 21st century. As best as I can tell, there's widespread support for the actual scientific mission of the NIH, both inside the administration, in Congress, and elsewhere. I think a lot of the budget fight is stuff that people get nervous over, but often those are inside-baseball kinds of things. Yeah, it usually changes. I mean, I think it's DOA in the Senate.

Josh: Last week, you gave a talk at the NIH where several NIH scientists walked out. Can you explain what happened? It kind of shows that there are scientists who disagree with you, and I want to hear how you think about scientists disagreeing with you, and your leadership too, on these things.

Jay: Yeah, Josh, one of the first things I did when I got in was put in a policy of academic freedom for intramural researchers. You know, there are folks who work at the NIH—scientists who work at the NIH. They're called intramural researchers. Apparently, what had happened before was that scientists who had a paper they wrote had to get substantive clearance from their supervisors before they were allowed to send it to scientific journals. So, I removed the requirement for substantive clearance.

I believe very strongly in academic freedom and in free speech. And that includes people who disagree with me. I fully expect people to disagree with me. That's normal and right. I expect to learn from that. Sometimes I'll change my mind when an argument is made.

What happened at the town hall: I gave a town hall to introduce my vision for changes to the NIH—like reproducibility, a focus on chronic disease, support for high-risk, high-reward research, support for early-career investigators, things like that. One of the items I talked about is making sure that the NIH does not support work that puts the world in danger, that has the possibility of causing a pandemic, for instance.

While I was making that point, I think a few researchers—maybe part of the postdoc union—got up and walked out in a silent protest. I got an email from them later, complaining that they had not gotten to meet with me and ask questions. There was some irony in that, because during the town

hall, I took lots of questions from the audience. We got about 1,200 questions NIH-wide before the town hall, and I answered some of those during the event, just like you're asking me questions now. Then I opened the floor for more questions from the audience.

If that postdoc group had stayed, they could have asked their questions. I very, very strongly believe in free speech, in academic freedom, and in engagement with folks. I have a great respect for them.

Josh: You know, one thing that struck me, you didn't seem angry at all when they got up and walked out. You weren't unkind to them. Of course, you weren't comfortable, but you kind of took it in stride.

Jay: I was kind of bemused. If they just hang out, they can ask their questions. Right, so free speech doesn't necessarily mean I agree with the person talking to me, and free speech can be uncomfortable. But to me, my entire career has involved arguing with other scientists and friends to learn stuff. There's nothing wrong or bad about that. In fact, I think it's essential to science. As a leader of the NIH, I want to get feedback from people so that, you know, if they have a better argument, I'll change my mind. I wasn't angry. I still think many of the postdocs and scientists here are among the very best in the world. I think their political views, likely, many of them are different from mine, but why does that matter?

Josh: Thanks for talking about that. You know, RFK has a big initiative that's supposed to be testing a hypothesis about vaccines. We're supposed to find out the root causes of autism by September, I think. Is this under the NIH?

Jay: It's my job, yeah.

Josh: I really worry about that. As a medical doctor who has studied some of this too, we do know a lot of the contributing factors and even causes of autism. It's weird that they talk about how we don't know what the causes are. We know what many of the causes are.

Jay: Josh, if you know the answer, tell me, because I also read this literature, and I'm frankly mystified about the cause of the rise in autism. What I've seen in my career is that a lot of scientists are afraid to address the question because they're afraid they'll get called anti-vax. Now, I don't believe that it's likely that vaccines are the cause of the rise in autism, as a matter of science. My read of the scientific literature—now, I'm not the world's expert in this, so take that with a grain of salt—but what I will say is that… well, I mean, I guess. If you know the answer, I'd love to hear it.

Josh: There are a lot of studies that have shown, for example, that a high contributor is paternal and maternal age. You can actually trace it to *de novo* mutations. That's definitely one high contributor. That also kind of explains the paradox of why higher socioeconomic status people have higher rates of autism. Another clear example: if you look at autism symptoms, they're constant over time, but if you look at diagnosis rates, they're increasing. That's because diagnostic criteria are changing.

Jay: I looked into the diagnostic criteria explanation. I think they explain some, but not all.

Josh: I agree. It's not all.

Jay: I think I've seen the maternal-paternal age hypothesis. I agree with you—that's promising. But I've also seen other hypotheses that are promising. I'd like to have an assessment of the various hypotheses and how promising they actually are.

The thing that I've launched is an NIH-focused project to elucidate the etiology of autism. By September, we'll have a dozen or more research groups funded. We cut a lot of red tape to make this happen pretty fast. We'll have a scientific competition to identify those groups, just like the NIH always does. We'll have basic science as well as more applied epidemiological approaches. We've created this large data platform, which doesn't exist now, so that you can deploy datasets that include genetic information, longitudinal healthcare data—including electronic health record data—environmental exposure data, information about parents, tracking that allows scientists, in ways that protect confidentiality, to track the experience of autistic kids. We're going to work with groups that represent autistic families or autistic kids to advise us on how to do this. That's the standard way the NIH deals with problems like this. So it's going to apply excellent science.

Josh: There's a gap between what you're saying and what Robert F. Kennedy is saying, because he's saying that we'll know the answer in September.

Jay: I've been saying this till I'm blue in the face. When I've given interviews about this, what I'm saying to you is exactly what I say to everybody.

Josh: I believe you. But there's a contrast between what you said and what RFK said.

Jay: You're responding to the way that—this is analogous to what I talked about with the *Science* magazine reporter, right? They're trying to create havoc rather than engaging in good faith about what we're actually doing.

They're trying to create havoc, and the news media wants to create this narrative of, you know, Bobby's anti-science, President Trump is anti-science, and they're using the NIH as a cudgel and misinforming the public about what we're actually doing, misinforming scientists about what we're actually doing. So that's a major problem. The news media also has a responsibility to get the facts right. What I'm telling you right now is just the facts about the structure of the program we're actually doing.

Josh: What you're presenting is a lot more reasonable than what I've heard RFK unfiltered say. That's all. And it's fine. I believe you—what you're saying is happening. I'm just noting there's a contrast, not with the reports, but what I've actually heard him say.

Jay: He does respond very positively when I talk with him about the kind of program I'm talking about. He understands. When people communicate science, it depends on… I'm a scientist, I'm communicating science in a way that scientists can hear and understand, right? And it's the reality of what the program is going to do. Well, that should matter more.

Josh: If what's happening is that RFK's overstating and misstating things, but then it's going to be a reasonable program, I think in the long run, it's fine.

Jay: Yes, but I'd say one other aspect of that: the news media often misreports facts in order to create a narrative. I've seen this over and over again with stuff I've said, and it's deeply irresponsible. It makes scientists scared, it causes divisions that shouldn't exist, and it undermines the ability for actual science to happen. It scares scientists away from actually asking.

Josh, I'd love to see you, as a scientist, apply and give your perspective. Engage with other scientists on what the cause of autism is. I think parents deserve an answer. We have this 1 in 31 number, and honestly, I've read it a bunch. I'm not an expert in the topic, but I don't understand. I don't know the answer. As a scientist, I'd love to know the answer, so when parents ask me, 'What's the cause? What can I do?' I can give a better-formed answer than, 'Well, you know…'

Josh: There's been a lot of upheaval, it's fair to say. Some of it's misinformation, some of it's actual changes. I've never seen quite this much upheaval in science before. I have to say, a lot of young scientists and even established ones are really— in a way I haven't seen in my lifetime—struggling to see a future for themselves in science. What would you want to say to them right now?

Jay: I'd say science is still incredibly powerful. The United States is still the world's leading nation in investments in biomedicine. The future for science is bright in this country. They should focus on the reality that we have these tremendous investments, this tremendous environment where biomedical research can happen, rather than on fear-mongering or generalized worry.

A lot of the worry comes from two main sources. One is the fact that much of the biomedical workforce in this country are not Republicans. They are not particularly big fans of Trump. A lot of it is just this unfocused worry about their political enemies being in charge of the country. But they're not enemies—they're just a different party.

The second source of worry is essentially fear-mongering and misreporting by the news media, whose aim seems to be to create a false narrative that President Trump or Bobby Kennedy is anti-science. As far as I can tell, that's as far from the truth as can be. The President wrote a letter to his main science advisor, Michael Kratsios, specifically committing the United States to being the leading nation in the world in biomedicine in the 21st century. That's what the actual policy of the administration is.

Josh: Christians are a diverse group. Some of them are excited about the next four years. There are also a lot of Christians who are uncertain about the next four years and what it will mean for science, public health, and religious freedom. For those who are really skeptical, what would your final message to them be right now?

Jay: I mean, we're called to be the salt of the earth, the light of the world, right? As Christians, that doesn't have a political slant. It may have political implications, but there's no political slant. Christians have many different kinds of political opinions. Mainly, I think what I'd ask is that we

treat each other with good faith—that we actually listen to each other, try to understand from each other, learn from each other. I think that will eventually pay off much better than assumptions of bad faith and evil intent when there are none.

Josh: Thanks a lot. Those are my questions. I really appreciate your answers. We have a little more time. Is there anything else you'd like to talk about, or any other questions you want me to ask, or things you want to offer?

Jay: This was a fun interview, Josh. I got to say, I was looking forward to this. I'm glad you're writing. Are you publishing the interview verbatim, or are you going to write it up? How are you planning to do it?

Josh: I'm going to get a transcript, do some basic polish, and remove some filler. They're not going to let me publish the whole thing in *Christianity Today*, so it's going to be abridged, but I'm probably going to put the full version on *Peaceful Science* or somewhere else. If they let me do it there, that's great. I think we covered a lot of stuff that people, for different reasons, are going to care about. I want to get the full text out as soon as possible. And to be clear, I think it's very good that we recorded it, too. I don't want there to be any confusion. I don't want to misrepresent you or anyone else. If you feel like you misstated something and meant it differently, just let me know.

Jay: I think I said what I meant to say, but it's always possible.

Josh: I'm not doing gotcha journalism, even though I did ask some hard questions.

Jay: I know. You're supposed to ask hard questions. I don't mind. You can tell I don't mind hard questions. I just don't want a bad-faith interlocutor. That was the problem with that *Science* reporter.

Josh: Yeah, it's got to be challenging.

Jay: Normally, *Science* does puff pieces on the NIH director, right? But the problem is, that reporter misreported the science on the origins of COVID for almost five years. Story after story, she was very one-sided in her reporting on the origins of COVID. In fact, one of the people she or John Cohen cited as a critic of mine in that *Science* magazine piece was actually a program officer who funded EcoHealth Alliance at NIH—and then subsequently left NIH. They didn't report that conflict of interest.

I think this is one of those things where science reporters mainly have other scientists as their audience. They've been very successful at panicking other scientists. But the public sees scientists acting badly.

Josh: Look, I'm in a weird spot, Jay, because I'm very sympathetic to the argument that scientists acted in untrustworthy ways, which caused problems. I'm very sympathetic to that. Another example I often point to is *Nature* endorsing Biden over Trump in 2020, which they never did before. There was actually a PNAS study that looked at the effect: it didn't change anyone's vote, but if you

voted for Trump, it made you trust science less. That's an evidence-based approach to understanding what happened—even though we could have known that ahead of time. And then in 2024, the exact same thing happened. It's like taking a gun and knowingly shooting yourself—not just once, but twice.

So I'm very sympathetic to that argument. But at the same time, I do find a lot of things happening right now very alarming and concerning too. And it's not just because I've heard it—I've done as much due diligence as I can to really check.

Jay: Well, we can talk about actual facts rather than general anxiety. The general anxiety, in my view, is often a response to false narratives.

Josh: I'm not talking about general anxiety. I have anxiety being produced by things that are not just narratives, if that makes sense.

Jay: Some of it is. But if it's actual facts, then of course we should talk about it and see how we can address it. For instance, there were some grants where it was frankly mistaken that they were rescinded. We have an appeals process we've set up, and I think about 20-30% of the time, we end up reversing.

The dividing line between DEI and legitimate science aimed at improving the health of minority populations—it's fuzzy in some places. We've been leaning over backwards to make sure we don't defund science that has the potential to improve minority health. If it meets the falsification criteria—it's actual science that has a chance to improve minority health—we will fund it.

Josh: Just as a side point, I think it's important: if this is going to be part of NIH policy, Popper's criterion—falsifiability—doesn't really work as the sole demarcation criterion. I get your point—you're trying to get at the ideological stuff, the very highly ideological work that's just confirmatory. I can agree that's not science. But there's the demarcation problem in philosophy, which I'm sure you—

Jay: I know about it, Josh. I'm simplifying, but I think Popper's thing works here. In this instance, I think it works. I'm not saying it's the only way, and I know there are all these fights in philosophy of science over exactly how demarcation works. We may never get a clean answer. But Popper's criterion works in some cases where it's really clear. Marxism is not science. Freudian psychology is not science. Those are the two famous examples he gave. I think this is one of those situations where it just works. That doesn't mean it can work in every case, but I think it works here.

Josh: You can ask a question: one of the criteria you're looking at from NIH is, "Are there ideas being tested that can be falsified by the data?"

Jay: That's what I'm saying.

Josh: That's a clear criterion.

Jay: Yeah.

Josh: A lot of this uncertainty is just because there's a lot of movement and change happening. It's very possible that a year from now, things will be much clearer.

Jay: People don't hear what I'm actually saying. You're listening to me, Josh. I can tell you're listening. You're trying to understand where I'm coming from. Science communication writers haven't really been attempting to listen. They're not engaging in good faith. You are. That's a very big difference. I think you and I probably disagree about some things, but you're engaging in good faith. That's very different from what I've experienced with some science writers during the pandemic.

Josh: The pandemic was bad in a lot of ways. It's striking how legitimate scientific disagreements about the origin of the virus, or even just questions—those weren't even necessarily disagreements—got shut down. The lockdowns—you get a "devastating takedown." That was such an irresponsible use of—I think that was really irresponsible.

Jay: And I got death threats for two years, Josh, as a result of it.

Josh: I'm sorry. It's stunning to me, honestly, some of the stuff that happened. I've followed you for years on this stuff—not always agreeing with you. But it's not about agreement. A lot of this isn't even about the policies as much as how we dealt with disagreement. That's a big part of it. If there had been real scientific debate—if Collins had convened people to debate and hash it out—and we'd been more honest about the scientific uncertainty…

Jay: I tried to organize a conference in 2020 at Stanford. It was denied. Again in 2021 and 2022. Not until 2024 did Stanford let me organize a conference. I invited people who disagreed with me. A few brave souls agreed to come. It was great. I honored those folks. I did my very best to make sure they were comfortable.

Josh: Those are the sorts of things that have made me more hopeful about you than some of the people you're working with. I don't need to name names. I'm not talking about career scientists at NIH. You can probably guess where I'm going. I'm hopeful in some ways about your directorship but very concerned about the context you're in. Does that make sense?

Jay: It does. It's easy to point to people who have been quite abusive on the other side. I've done my very best to forgive them, Josh. I have no choice. That's what I'm called to do. It's difficult because people's careers were ruined. There was a lot of slander, attacks. People lost their jobs. People lost their reputations. And the regular public—kids are behind by two years in schooling. There was massive inflation for years. And 100 million people faced starvation in poor countries.

Jay: It's one of those things where there's no way to avoid the…

Josh: Yeah. I'm just trying to say: I acknowledge that there were mistakes. Things really should have been handled differently. I've been a critic of Collins myself. That was some of the riskiest

stuff I've done in my career. I think part of what made those issues such a big deal is that they had power. If they'd been making bad decisions without power, it wouldn't have been such a big deal. But they had so much power. And now the shoe's on the other foot. A different group has power. How that power is deployed can have a huge impact—negatively or positively.

Jay: Or positively.

Joshua: Or positively.

Jay: That's why I picked a set of things I want to accomplish that I think everyone can get behind. We want to make America healthy. We want to address the chronic disease crisis and improve longevity. We want to solve the reproducibility crisis—it's a major problem in science. We want to make sure early-career researchers and others can survive having their ideas fail so they can take risks that eventually lead to huge advances in science. We want to solve the scientific stagnation problem. We want free speech in science. We don't want to do really risky research that could potentially put the whole human race at risk. Those are the five points. I don't see how any of that is partisan.

Josh: I don't know if those points are partisan. I mean, I might not even care whether they're partisan. I'm one of the reviled moderates in these conversations. Those evil moderates.

Jay: You agree with all five points?

Josh: I do. But that's not what the issue is about.

Jay: That's my vision. When I say that, people don't engage with me in good faith. I really mean those five points. If I can achieve those five things, I'll give myself an A as NIH director.

Josh: That's a great plan. But there are other concerns. I'll give you another one you might care about: what's happening with student visas over the last six months has been really surprising. So much of science has involved foreign scientists coming here on visas to train or get positions. It's been one of our great strengths. The greatest minds come here, they want to study, they work, some of them stay. But now that's really under threat.

Josh: I'm not talking about people involved in Palestinian protests or anything like that. I'm talking about the instability in maintaining a visa. It's completely eroding the ability to do business as usual in science.

Jay: That makes sense. There are national security issues that haven't been addressed. There were concerns before the pandemic…

Josh: I'm not talking about national security issues. For example, there was a scientist who had a speeding ticket, and on that basis, his visa was revoked just months before his PhD was done. It eventually got reversed after a huge legal battle. It wasn't political—it was just a lobotomized

review of legal records. and if they found encounter with the law, then they just revoked status without any concern for the context.

Jay: I'm not familiar with that case, but that doesn't make sense to me. The main impetus I've seen is national security—students from countries of concern coming to the U.S., then going back and bolstering biomedical science in those countries. But how the U.S. interacts with the world is in flux right now.

Josh: That's what's putting at risk the goal of having the U.S. lead in bioscience. We all agree on that. But making it unstable and risky to be here as a foreign student or academic seriously puts that at risk. I have examples—both in the media and privately—that are real. And I'm not talking about illegal immigrants, or students involved in protests, but…

Jay: Hey, Josh, I'm sorry. I've got a 2:30 meeting. Maybe we can do another one of these. This was fun to talk with you.