

# Susan Martinis Interview

Vice Chancellor for Research & Innovation, Office of the Vice Chancellor for Research and Innovation, University of Illinois Urbana-Champaign

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## **SPEAKERS**

Susan Martinis, Sammi Merritt, Inbar Michael

### **Inbar Michael 00:01**

Great. All right. So my name is Inbar Michael, and I'm a graduate student representing the University of Illinois Archives, and then let you introduce yourself.

### **Susan Martinis 00:09**

Thank you. I'm Susan Martinis. I'm the Vice Chancellor for Research and Innovation. I'm also a professor of biochemistry. And I've been in this position for about six years.

### **Inbar Michael 00:19**

Great. All right and where we are. Today's date is Thursday, February 16, 2023. We're here in the Swanlund Administration building to discuss how the COVID-19 pandemic impacted Research and Innovation at the University of Illinois Urbana-Champaign, we will be using this interview to include in the University of Illinois and COVID-19 documentation project. All right. For our first question, would you be able to tell us more about the Office of the Vice Chancellor for Research Innovation, also known as VCRI? What are the primary functions, goals or products with the department? And how does it serve the student population?

### **Susan Martinis 00:57**

Yeah, thanks for asking that question. I love to talk about the VCRI. We have what I would think of as three primary functions. One is compliance. There's a lot of federal and state laws and ethics, issues around research and innovations. So we hold the compliance arm of the university. The other is a research corporate relations, external relations. We have a research park that I oversee, and also a entrepreneurial incubator. There's about 120 companies and some global companies and also about 60 startups in our incubators. And you asked about students, we train more students in paid internships in that park than any other research park in the nation about 850 a year, really proud of that. And then the third arm is our institutes our in campus interdisciplinary institutes, we grew by about four under you know, my watch, according to the next 150 strategic plan that was launched in at the University of Illinois Urbana-Champaign. These institutes have convergent research where we bring in different disciplines. And what's fun to think about for that is the Beckman Institute, for example, was put up when I was a PhD student here in the 80s. And my advisor's lab was the first one in there, it was the new first model for the nation. And it puts engineers, psychologists and biologists in the space where they bump into each other and great things happen. So and we have a lot of not only graduate student

training that happens, but also undergraduate student research training in there. So we're kind of holistic when we think about campus and the different ways we impact campus.

**Inbar Michael** 02:46

Right. And when you say Research Park, you're referring to like, cause I know in the Information School, there's like opportunities with like UX design and things like that is that the same.

**Susan Martinis** 02:55

I think that might be a little bit different. If you go into the southwest corner of the, you know, the main campus, over just beyond State Farm, near the I Hotel, you'll see a bunch of buildings, I think there's 13 now that have been put up. And what we do is we have a we have a developer that's worked with us for years, Peter Fox from its inception, and we lease space to major companies like Yahoo. And I'm trying to think State Farm and Abdy and Procter & Gamble [P&G], are in a video, just some examples.

**Inbar Michael** 03:02

Okay, great. Thank you. How would you describe your role as Vice Chancellor for Research innovation? Yeah, sorry. I thought there was a second part of that question.

**Susan Martinis** 03:42

My role is- why I report directly to the chancellor. And so I have the research and innovation arm of the of the university. I have a superb team of about 12 leaders in my office. And then I have a kitchen cabinet of these brilliant institute directors. So all those pillars of the admissions and the values of campus, really we have threaded through what we do. And my role is I sign up and a lot of things that other people have developed. I am a conduit for Government Relations, when we need to talk to our elected officials. I'm a conduit to help recruit and retain some of the faculty that we have here. I try and be a connector for campus. And I've also been a an ear for students that need someone to talk to.

**Inbar Michael** 04:40

Many roles [inaudible].

**Susan Martinis** 04:41

Yep, yep.

**Inbar Michael** 04:43

So when did the COVID-19 pandemic come onto the radar of the VCRI office? And when did the office begin to discuss response efforts.

**Susan Martinis** 04:53

It's a really good question. So there's what's interesting about the very first COVID case, it was in my hometown in Everett, Washington. So it hit there. And so I started watching it. And I think that was in December. And so I just started watching it. And I was fascinated by the Johns Hopkins dashboard, watching it kind of move around. The second piece, there's gonna be three, three or four parts of this. The second piece is I had been in Singapore with our chancellor in December. And it turned out that the Singapore, two hotels down from where I was staying, was one of the first hotspots because there

was a buffet and there beautiful buffets in Singapore, where some people from England had been to for a conference. And then when they went home, it turns out, they picked up COVID. And they took it but they didn't know till this set of people went to a French resort ski for vacation. And there was kind of an explosion of COVID cases out of that ski resort. And they traced it back to these English people who had been eating at this buffet, like just a couple of weeks after we were in Singapore. And then the third. And so I kept watching the Johns Hopkins thing and seen it bubble up. And then I saw that there was a incident in Florida, where President Trump had met with the president of Brazil. And the reason that caught my eye was because President [Timothy] Killeen was planning to take a delegation that I was gonna be a part of down to Brazil in March, like the second or third week of March. And so I was noticing that the cases were blowing up in Brazil. And so I really started watching and I said, Well, I wonder if we're gonna go and Present Killeen. Secondhand, I knew that he said that we're still game, we're still game, we're still game. And I thought, well, we'll go and then it got canceled, like the week before. And so it just kind of, we were all watching and ramping and, and thinking about, you know, can't it can't really get to us, right? And then the fourth event that I'll say the first week in March, I was down in Nashville, at an AAU meeting. With all the other senior research officers from our peer institutions, it's Americans leading research institutions. So there's 64 of us. And we're convening like we do every year. And Kelvin Droegemeier, who was the director of the Office of Science and Technology Policy, and a former SRO and also one of our alumni, who's a former SRO at Oklahoma. He was one of our guests. And he was the guy that was on daily calls with the other science officers from around the world representing their countries. So he came in, he came in a little bit late. And he explained this to us that he was on those calls, trying to figure out what everyone was doing. So that was very impactful. And so it became a friend of mine who's talking about, you know, a little bit about how the Trump administration was addressing this. And what was really interesting is that spring break for many of those schools was popping up. Ours was a little bit later. But all of a sudden, our my colleagues are getting calls from their presidents or chancellors to come back because they were making decisions about what to do with spring break. So on the first day, that afternoon, the room started emptying, and the next it's about a two day meeting. And the next day it was people were just streaming out, I stayed till the end, others maybe 10 of us 12, 15 left, because our spring break wasn't till two weeks away, so we just weren't quite there yet. And so all these universities that kind of got ahead of us and decided their students were not coming back. And so that kind of gave us you know, some time to think about that and plan and learn from some things that they had done. So there's kind of four events through there that just kind of spilled out.

**Inbar Michael** 09:20

Yeah, that made me think back to when I was cause I was in my undergrad. And I think our spring break was like literally right after well, it was right after finals because I was on the quarter system. And like the finals week, was like, right, like, right when they're like, Okay, we're all like, going home don't come back. So like thinking of-

**Susan Martinis** 09:41

And you left all your stuff there, right? And then we had to figured out how to let the students pick up their stuff stay safely.

**Inbar Michael** 09:48

Yeah. Great. Do you remember- or maybe like you had touched on this a little bit already? But do you remember your last day of work before going into lockdown around March 17? but also might have been 13. But that's what I was in California it was the 13th. And could you describe how you felt?

**Susan Martinis 10:06**

You mean my last day of being in Swanlund because I'll tell you the workload ramped up to- I love to work, but it ramped up to something I've never had been experienced before, I can remember that there was people that were really nervous. And I wasn't particularly nervous. So I, and there's people that were deciding to work from home. And so it was kind of emptying out a little bit here. And then, then there's a point where we're mandated to be home. And so I have a family of five. And so my husband took over the dining room, my two children had their rooms or other parts of the house, and my three children had the different parts of the house. So I was left with a big easy chair in my master bedroom, where there's a big box that I'd never unpacked from our move 17 years ago, and that's where my laptop was. And that's where I stayed. But the VCRI, I- when you talk about lockdown, there's some of our units that can't lockdown. For example, we take care of all the animals on campus, there's 30,000 animals that we work with. And each of them needed to be checked each day. And we learned a lot about what they're doing, because they by mandate, have to have a plan if there's a disaster, how to how to ethically take care of those animals. So we learned about their succession planning, how they were ramping down animal research, because, and what would happen if, you know, there were no animal caregivers to be around. And so immediately, we learned from them. And we talked about succession planning, who would take over if I went down, who would take over if our financial officer took down. So I asked everyone to think about this isn't the person you might expect to take over long term, but who knows the job. And who can take over? Well, it turns out, I was the first one to go down, but not with COVID. I got up in the middle of the night, and I tripped on a laundry basket going down the hall, and I broke my shoulder. And so I was in the Carl emergency room. And then I knew what the intensity that we were working to keep the campus moving with some of our essential research that I just, you know, I went into the emergency room, came home, I knew I had to take pain pills for a couple days. And I because I will tend to just work through things. And I did that. And I told Melanie Loots my second, you know, my right hand that she's in charge, and she ended up going and meeting with the Chancellor's group. So just but I'm not gonna be any good. If I'm half there, right now's the time to just step down, and then come back in two days. So that was a very, very, very interesting time. So the lockdown, you know, I always thought it was kind of good for our family. We, as a for work life balance, we got rid of all those activities that we're always running here, there and everywhere too. And, but it was hard because we're also we're working a lot to figure out- whit the campus working every day to late to morning, I was part of the effort that launch SHIELD I was ground zero, actually. And I can talk more about that. So that just took endless, endless meetings and consultations and think tanks.

**Inbar Michael 13:39**

And I know that like the school started back up in the fall, were you already back in your office at that point? Or like When did you return like working in person.

**Susan Martinis 13:50**

Um, I was back earlier than most people. I'm trying to remember if I was actually I would kind of come in and be around and then but it just sort of dependent on if I had a break in the schedule because with the Zoom culture, you learn that there's there doesn't have to be a break you just pop in and out, right? So sometimes there wasn't a window to even get home in time or come in. So but I was kind of one of the first ones back around. And then there are some of my employees that found that they really needed for work life balance, they needed to be in office so that they could leave the office shut down on leave work behind and so we had a few people in because of that and if they were in I'd like to be in, but it was pretty lonely place.

**Inbar Michael** 14:37

What Oh, do you have like a like a like an estimated date? Like when you started like or was that the whole time?

**Susan Martinis** 14:44

It's a whole continuum. Yeah, I think there was a month that we were mandated to be away and then I would you know, I was kind of mobile. I come in here and then sometimes you home because the whole family was home and they needed stuff. So yeah, I would pop in and our researcher we worked really hard with the governor with government relations, to make sure essential research was put into the Governor's executive orders. So we needed to be around and be thinking about what that looked like. And so then who defines essential research? We had the units do that, you know, if they're working on a pandemic response, or one thing, remember, we shut down in March. Well, we have a lot of agricultural research. And if they didn't get their seeds planted, then they lose the whole season of research. So we worked with a lot of different units to figure out what's essential research and what's no. Different units, different disciplines had different tolerances to that. And I think the ones that have suffered the most are those who did human subjects research, because how do you go have a consultation or an activity with another human being to ask questions or to go through some procedure, when you're worried about transmitting COVID. So hard. But I also learned things I learned that agriculture people out in the fields they have tornado shelters, in case that comes up, but what do you do, because the tornado shelters are very small. So all of a sudden, you're shoving people into these very small rooms if there's a tornado, so there's so letting the disciplines sort of really think about their safety plans, kind of put in place, we wanted you to have a safety plan. So whether you're in chemistry, or crop sciences, or working with our swine, swine facility, doing images, imaging, or human subjects work, they had to have a safety plan. And that came from really organically because I don't know what it would take, you know, with a tornado. I'm a biochemist, I work with molecules.

**Inbar Michael** 16:54

Great. Okay. We'll move more to some research and innovation questions. So the VCRI office lists 10 Illinois Research Institutes what challenges did the VCRI office face during the COVID-19 pandemic was such a large and diverse network of researchers, units, and institutes. I know that you touched on this a little more, a little bit, do you want to talk about that more?

**Susan Martinis** 17:17

Yeah, I think human subjects were the heart. In hindsight, that was the hardest hit. Also, women were hit in disparate ways because they're often the caregivers and they were trying to do everything at

home, schooling their children, taking care of them, giving, by helping them with mental health while trying to do their work that that's pretty well known. I think up in places like the Beckman Institute where they have a lot of imaging that goes on. You know need to think about your imaging humans, they also imaged pigs, and they were on the more conservative side with COVID, which is fine. But then there's a lot of researchers that couldn't get their work done and move the portfolio forward. The IGB [Institute for Genomic Biology], for example, was really activated, helping the state, the Illinois Department of Public Health, because they were running out of a liquid solution were for testing. And so we figured out, we could supply we can supply that call that essential research. NCSA, our National Supercomputing Applications Center, they were setting up by T4 the company called SHIELD T3, to distribute our tests, you know, around the nation. So they were working all out. So the institutes you know, really did come together in so many ways. I mean, so many ways, they went in, remember the old nose swabs, they were running out of those in town. So our material scientists figured out how to make some ones that actually were probably better than the other swabs. So we did a lot of work with that. We also helped with our Carver Biotech Center, when Carl didn't have the test, or any type of instrument do the test. We did a very fast agreement that my office facilitated to move our actual instruments our machines from our Carver Biotech Center over to Carl so that they can actually screen over there for who was coming in the hospital. And then several months passed, and we needed them back for a SHIELD test. And we said, Hello, we need those back. And they said, Oh, and so then they had to, they had to go out and buy their own, but just we kind of worked with all of our research units to really mobilize whatever we could to fill the gap. I also chaired the Chancellor's Economic Development Advisory Committee And that's local business people and some city leaders. And so we were able to pull them together to give them updates and talk as a community. And those are really powerful. For example, we learned that ClarkLindsey, they were short on gloves, and they had all these elderly people. And so we knew that we had I had on all our store rooms, shut them down and said, Don't let the gloves and then also some of the materials that you can use to make disinfectant fluid, right, so hand sanitizer was in there. So we just set that aside, and then we stockpiled it for a while, until we knew that there wasn't going to be a crisis in that area, but we're able to deliver gloves to them. So there was a lot of with our networking, there's a lot of really small things that we did have great impact to the community and very large things that we did that were impactful beyond Champaign-Urbana.

**Inbar Michael** 21:00

And you said it was called the economic advisory committee?

**Susan Martinis** 21:04

Yeah, the Chancellor's Economic Development Advisory Committee. And so I chair that. And usually Provost Cangelaris and the Chancellor are also there. And it had just local leaders like Jim [James C.] Leonard from who is president of Carl.

**Inbar Michael** 21:20

Okay, great. Yeah. Wait. So it's not a question that was written here. But like, how many hours were you working? It sounds like so much work?

**Susan Martinis** 21:31



Yeah, no, I would. Yeah, till midnight. Wow. And then up at six or seven. And then because I was at zoom, I could just throw on my sweats and, you know, yeah, pull out the computer. And my team started meeting, I have a leadership team of about 12, we started meeting nightly, or daily, I should say, every day for an hour to you know, figure out what's going on campus. And then I'm talking for seven days. And then gradually, when we got on top of it, we went to five days, and then every other day, and then and that resulted in a weekly meeting that we have now we never had that before. So yeah, there was no time, I was working well, I was ground zero from the SHIELD team. And I can tell you how that started. But when we were trying to get the test implemented, I dispatched one of my employees, Kraig Wagenecht, as Project manager to work with Marty [Martin Burke] and Paul [Hergenrother] and Tim [Killeen] to implement. And so we had a lot of, feedback from that. And then I would work directly with them. I can remember Marty Burke still saying one time, okay, when are we all going to meet? Because we all had to get the FDA. And it's like, okay, eight in the morning and [inaudible] would say no, then I remember saying 7am? No, I got a meeting then. And then it was like 6am because we're trying to move toward this July deadline to launch the pilot. I remember that distinctly. And then there was one meeting, you know, with it, it wasn't just me work. And it's like, at 10 o'clock at night. I can see Paul Hergenrother in my head looking really tired as we're trying to figure out, I think about the FDA process, how to get that through, but it was a big think tank of people working.

**Inbar Michael** 23:09

Yeah, we've heard with like, a lot of interviews, like just working [on stuff].

**Susan Martinis** 23:15

Yeah, that's right. There was a point when I realized, okay, on Friday night, I'm gonna, I still do this now, I'm gonna just shut down because there's nowhere to go, right? And I'm gonna shut down. And then we're going to just watch movies. And then till Saturday morning, then, and then sleeping a little bit. You know, there was like three or four months in when we're through the worst of it. I mean, the work still continued intensely through December for us, because not only did we set up our test, but then they're trying to launch for the state of Illinois and SHIELD T3. And then I can remember that December, everyone just retreating. Everyone just retreating because they needed that time. Except they were trying to get SHIELD T3 off the ground. And I can remember my last meeting before the holiday with it was with Greg Gulick and Kraig Wagenecht and Greg is the only one we really lost from our community to COVID. Then he went in the hospital a COVID. And he died in January. He was overall the IT so that was kind of hard, but we were trying to solve the IT problems and still worked over Christmas, but a lot of people that they just needed to go and retreat and they could at that point, but we had picked up to help SHIELD T3.

**Inbar Michael** 24:40

Oh, yeah, I was looking. There's no- Yeah, well definitely ask about SHIELD T3 it's not written here but I will think of a question along the way. Okay, so, again, you've also talked about like essential versus non-essential activities, but UIUC shut down March 2020, to shutdown on essential research activities to comply with the Governor's Executive Order. What metrics were used within the office to determine what is considered non-essential versus essential?

**Susan Martinis** 25:11

It's a really good question. And I decided that we would not be able to exactly decide what was essential and non-essential. And so this was very organically done. And so for example, I hadn't even thought of the agriculture and then I realized that the seasons would be lost if they didn't do that. So we have to feed the world, right? And we have to, we have to know these answers. So what we- that, you know, they came to us, some people wanted more guidance than others and we would help them with that. We have the Prairie Research Institute, which is in every county, and they do a lot of work for the state. So you know, they [inaudible] they have drive so they improvised ways where everyone had their own car. So you know, it wasn't right for sustainability. The Beckman Institute sort of stayed closed, and then they gated who went in and out. But it was very organic. And I think some groups really also felt very compelled to step up and help like the IGB. Making this. Oh, I'm gonna forget the name of it. I want to call it BDL. But that's not right. This solution that would be for testing. So and then we found that some people were kind of confused. And if they were confused enough, it would get to me. And then we'd talk through it and say, Okay, what's essential here, and then some places like chemistry worked out, like a rotation so that people weren't in the labs, the densities were lower. And usually, if people were comfortable, because across the spectrum, you saw people that were more adventurous and comfortable with risk taking. And there are people that were not at all like that. And so if there was a problem, we heard about it. And so that's when we would dive in and help. So there was some you heard about, I mean, you've gotten a sense how much work there was to do. And we didn't think we could micromanage that. And so I made a bet that it would it would work out, and if it wasn't, we'd hear about it. And that's kind of what happened.

**Inbar Michael** 27:24

Okay, so there's like, a lot of flexibility and working with the units to kind of decide what the structure would be like across the board for different-

**Susan Martinis** 27:33

And you know, we have really smart, this is a very smart campus, and a lot of shared governance. So we saw a lot of kindness and compassion come out and consideration, so that paid off to people thinking about this and working together.

**Inbar Michael** 27:53

Yeah. And kind of along those lines, with having to make these sorts of decisions. Were there any, like projects within Research and Innovation that had to be like that were hindered or prioritize, rejected, like, rejected, like cancelled due to COVID?

**Susan Martinis** 28:11

Well, they, again, the human subjects research was really difficult. We didn't per se prioritize, again, that was kind of a local, a local decision. But I did help, we did try and help find a way. And COVID research was, you know, prioritize at the top. So we really dug in on the SHIELD tests and the FDA, I had people from, you know, clerical units that were over helping- people can attract people to consent to take the test and use that for FDA data. But we also were really careful because we never wanted our students to look like guinea pigs. And then I set up a committee, we call it C-ROC COVID Research Oversight Committee, because as our brilliant infrastructure developed, the nation watched them, a lot of people, researchers, and the government wanted to come in and use it and do their tests, whatever



they're doing either their COVID test or mental health or put wearables on people. And so we were really sensitive that we were pretty much requiring everyone to test and we didn't want it to look like setting up a big guinea pig farm for people to come in. So we set up a Research Oversight Committee, where anyone who wanted to use our infrastructure or data needed to run through that and most of those but not all were approved, and so they'd make recommendations to me and we did that the NIH [National Institutes of Health] came to us to use- to set up and understand the dynamics of COVID. And we did do those studies here. And that was really exciting because we contributed to understanding COVID better, even facilities and services pitched in because someone had to run the samples, and they're considered biologically risky. So we had to set up protocols for that, because they couldn't just go pick it up from this person. And so the drivers that had been inactive or facilities and services, they stepped up and went to pick up samples and deliver them to the lab for tests. So there's just everyone pitched them.

**Inbar Michael** 30:29

Right. Okay, so COVID research prioritize, but also, in general, just like not, may- you weren't making decisions. It's kind of like a collaborative effort. Yeah?

**Susan Martinis** 30:39

It was organic. I mean, we ran we run and NCSA we run the computers for the nation, you can't, and I, in fact, that program shifted over to do COVID- be it, they shifted over to form a COVID High Performance Computing, we took the lead on that with IBM, and shifted it over so they could be analyzing data. They also did the same for I think it was Hurricane Katrina. So you know, so they were working. Now, the computer people, a lot of them can be remote, but there was a point where they had to go into a closed space to build in some hardware around and that was a little scary for some of those people working on that.

**Inbar Michael** 31:17

Yeah. Okay, so during the COVID-19 pandemic, there was a lot of changes within the administration at UIUC, how did COVID-19 affect Research Administration within the VCRI Office? Was there a lot of turnover? Or did faculty members or staff move into new roles? I know that this happened, maybe not with this office, in particular but I just know a lot of people like ended up in SHIELD roles, because that was-

**Susan Martinis** 31:47

Oh, I see what you're saying. Um, yeah, that's a really interesting classes. So we didn't really write, we didn't really lose anyone of our more senior leadership team. But we dispatched partnered many people to help with the response. We were over there in CRCE [Campus Recreation Center East], helping man tables for research I had, we had to figure out someone who could take samples. And so my son's friend who was a medic, and in school, I said, Go get Charlie, let's see if he and pay him. And so, you know, we were using every networking mechanism that we could do our Office of Corporate Relations, dispatched a project manager to go over for the FDA. You know, the test, I used my son, they needed to go up to Rock Island, where they could collect enough positive COVID tests, because that was a hotspot through a mobile site to put into our FDA analysis, so my son wasn't doing anything. He's college student. And so he recruited some of his friends over but to do this, it's human subjects

research. So they had to take like five hours of training. So overnight, he took all that training, and then jumped on a van the next day to go collect samples. So there's just that's just kind of an example how we all used our networks to pull in anyone that could help. But you talk about research, and I actually feel like we were really stable in our leadership. Through that we have a really good team, not only in my office, but with the Chancellor's Office, and probably the next layer with all the Deans. But what's happened in hindsight, and then in hindsight, right now, is everyone's learned that they can work remote, not everyone, but a lot of our support, people can work remote that manage our sponsored projects, the paperworks, the proposal that goes into the federal government. And so there's a big remote environment. And so, and this is a national problem now. So those people are now getting picked up to work for like California for a higher salary. And so this myself and my senior research officers are talking about this a lot. And in a community like Champaign-Urbana, they can continue to live right here, but then go make a lot more money if they're working for UCLA. So we're, we've done a pretty good job trying to build community and add flexibility, but it's a it's an issue that we're all facing.

**Inbar Michael** 34:36

That's so true. I didn't even think about that someone could just like, find a work in another state. And, you know.

**Susan Martinis** 34:42

And the state of Illinois is one of the unusual ones because technically there's a law against us hiring people from out of state. Someone can start here and then move out and have a remote working plan. So we don't have the same advantage to be competitive like we can't go just pick off someone from you know, New Mexico or Arkansas to come in. So that means we pick up people from other public institutions, which is in our state, which isn't nice either.

**Inbar Michael** 35:11

Yeah. Um, so considering that many students were unable to attend UIUC in person, how did the role of graduate research students change within the VCRI office during the COVID-19?

**Susan Martinis** 35:25

So for graduate students, and I have some, you know, it was a really interesting time, and I've seen, they're good people, they held things together, they came in and they move forward, but the pace was much slower. And that pace kind of stuck coming out of the pandemic, it really slowed their research down. And then maybe now and getting their thesis done. I also noticed, just in general, that people have forgotten how to socialize. Even within my own office, someone came in, stepped in that had been pretty much working remote, and a bunch of us are in and we say, Oh, you're here, hi. And she said, Oh, my goodness, I'm kind of overwhelmed. Because it's just my husband and I work in separate offices home all day. And you know, she was really genuine. And I can remember when I first came out of my Zoom box and started bumping into people, is like, Oh, what do we do? Yeah, so over the first dinner with guests we had at a restaurant when we were kind of back. I remember, we used to share desserts. And it's like, oh, that was a thing. Oh, we used to have appetizers first and just have a social conversation. So we kind of had to relearn that. I think the graduate students did too. And I see with my own children, a high school or an a college student, they've kind of had the, well, at U of I, they still had their social networks I'll say the dorms are I think extra wild because they couldn't go anywhere. They're

all cooped up together. But they still had to kind of figure out how to go break the ice with a new social group that was harder because they hadn't practice like they normally would have.

**Inbar Michael 37:06**

That's so true. It was definitely- I worked with high schoolers, like, a year into the pandemic. And they had been, they were freshmen. So they had been like, online when they were in eighth grade. And like seeing like, it's just crazy to see how much that can impact them. Like, once they returned back to school, whenever-

**Susan Martinis 37:26**

I don't think we understand it at all. And I think this is why human subjects research is really interesting. I always say this is our World War II that our grandparents experienced in that mark, that generation. You're too young to have maybe seen that, but I'm not. And I think over the next several decades, as your generation grows, this will completely stay with you in ways that we don't understand yet.

**Inbar Michael 37:53**

Yeah. So according to the Office of the Chancellor, UIUC lost an estimated 70 million in revenue. How did COVID-19 impact the finances and funding of the VCRI Office?

**Susan Martinis 38:09**

It- we went through some recessions, recessions isn't the- rescissions, and budget cuts in our institutes and that was difficult because they were already lean. And so that was a challenge. It wasn't, we're fortunate that we don't have a big academic medical center at this point, because they really got impacted in a big way with cuts. So it could have been worse. But that was hard. Our sponsored programs research, there were no cuts there. That's a that's a, you know, a scope of work that's funded by the government usually, or some corporate entity or a nonprofit foundation. And so that was what was still there. But the institute's they got hit a bit. We're fortunate to see that increase in the state budget last year, which helps stabilize things a bit. I think. We slowed a little bit on some of the things we're trying to ramp up. But I'm grateful that we had our what we call the next 150 Strategic Plan, because it gave us a roadmap. And we step- kept still on moving, we'd already launched a bunch of stuff with that. And a lot of it came out of my office, like we shouldn't do the strategic plan all at once, but we tried to. Maybe in hindsight that was good because these things were rolling and compared to our peers across the nation, in the middle of the pandemic and beyond, they were starting to do strategic planning and they didn't have that roadmap. So I feel like compared to a lot of places, we actually fared pretty well. And then we had a bumper crop, I think because we did so well on the pandemic, we had a bumper crop of students the next year, which brought in a lot of tuition dollars, which helped make up some of the shortfalls.

**Inbar Michael 40:10**

Right. And we had talked a little bit about this before with C-ROC with the Research Oversight Committee. And you'd discussed, like, people from around the nation that perhaps wanted to utilize, including NIH. So you talked about the role of that. But specifically, the second part of the question was, how challenging was it to implement this committee? Like if there was-

**Susan Martinis** 40:35

The committee itself?

**Inbar Michael** 40:36

Yeah.

**Susan Martinis** 40:37

That part- It's always a matter of who you get on the committee and how you chair it. And we had people from the CIOs [Chief Information Officer] office for privacy. So you know, information technology, we had people from our Interdisciplinary Health Sciences Institute, data sciences, we had some faculty representatives, and people from IT. So we put that together, we have just, I have a great team here. And so we talked to legal we had a legal person on there. So the fact that most of the projects made it through was a testimony to how well they work together, and they weren't just going to be a roadblock, and they were thoughtful about it. So in the end, it's kind of just in the mix, there's a point I realized that if we didn't have a structure in place, you know, this could really go south, from a public awareness, and there's still parents and legislators, so they're still mad that the students, everyone was mandated to take the test. In fact, I just had to go two months ago, before someone that was very upset about that. Still, that was an elected member of the General Assembly. But this helped us point to something that was- that piece I didn't think was that challenging.

**Inbar Michael** 42:00

And then, on the C-ROC page, it states that COVID-19 samples are available. So are these samples collected by the VCRI office or by UIUC as a whole, and then what type of samples were collected?

**Susan Martinis** 42:15

Okay, the samples that were collected were the saliva samples, and only if people consented to it. I'm gonna forget the number of how many were consented, I'm gonna say 1,000 or 2,000 I don't know I can't remember. And so when we and they were over in the they were collected all over campus. And there's some samples, like I said, that were collected from Rock Island. There's some that were from UIC. And there's some that were collected from Wisconsin, those were part of the ones that were fed into the FDA analysis, but there was other studies done too. So if they consented, then we kept them. If they did not consent then we, you know, disposed of them with our biomedical waste, which means they go somewhere else, and they're incinerated. And the Veterinary Diagnostic Lab, which we converted as a COVID testing lab, they are the keeper of those samples, they have custody of them. So as other sites adopted our technology, they would need some of these samples to calibrate what they were doing. So they would send a note to us. And this is when I realized I needed- it would go through our Office of Technology Management, some paperwork, and then it would also go through our Sponsored Programs Administration. And this is where I realized I needed more of a regulatory piece to screen these before we sent out samples.

**Inbar Michael** 43:56

All right, okay. So there's more questions here about the office, but I was thinking you did mention you were part of ground zero for SHIELD T3, and I do want to get a chance to ask about that. So what was the process like of getting that whole thing started?

**Susan Martinis** 44:10

So, um, I talked to you about coming back from Nashville, and then there was spring break on what was coming alive is the university is part of two groups two higher education groups. One is AAU. And that's the meeting I was at and the other one is APLU.

**Inbar Michael** 44:30

And those stand for?

**Susan Martinis** 44:32

AAU is Association of American Universities and has the top 65 universities in the in the nation, Chancellor Jones is the vice chair of the presidents but there's cohorts like Senior Research officers meet, communications, the Provost they'll meet and compare notes. The other one is APLU that's Association of Public and Land Grant Universities, so any ones that's a public institution can join. And Chancellor Jones was actually president of that during the pandemic. So had their Zoom meeting, and he handed over the gavel to the next President, that specifically, but there's cohorts of senior research officers in there too. And what was and then I'm also part of the big part of the Big Ten [Academic Alliance]. And so there's cohorts there. So with all those three groups, many have, are overlapping on our on all three. The email was alive with listservs exchanging ideas. And then we set up Zoom meetings and compare notes or have briefings from what's going on, like at the, at the national level, or whatever. So if I remember Big Ten, I just have to tell a story. My counterpart in Michigan is an emergency room doctor, that's her training. And I just remember her being- I really admired her because she knew the clinical thing. And she can make decisions that were very practical, very quickly. And I could take those lessons here and think about how we're doing it. She knew human subjects research really well. And so she could just focus on that. But we would compare notes. The APLU is really interesting, because it was a lot of chatter, tons of chatter, filling up my inbox. And so usually I don't respond, but there's a lot of people that are chatty. And then over that in March, it was after I broke my arm, I think, and was coming out of that. I saw well, we don't have an academic medical center, we can't test but I knew Andreas, had wanted to, we had a meeting, he says, I don't know how we'll get out of this without testing, we need to test. And I said, Okay. And then other places were trying to set up a test, they had medical centers, and then it came out that well, if you have a VDL What's that? a Vet Diagnostic Lab, you can do the test. So, um, and then I said, Okay, I didn't know what a VDL, that we even had a VDL at that point so we learned. And then I found out, you need someone else to order the tests, well if you have a student health center, like McKinley [Health Center], then you can order the test. So it was a aha moment. I said, Okay, we have McKinley, I know now we have a VDL, let me go start talking to those people. So I spent three solid weeks doing nothing but chasing this down to see if we can put it together. McKinley wasn't really very interested in being over the prescription the test. So they sent me to OSF [Order of St. Francis HealthCare]. And then as I was to talk to them, and I learned about what it would take to manage this test. And then I found out you need to something called a CLIA [Clinical Laboratory Improvement Amendments] lab. I don't know if you've heard that term. It's a regulatory unit that says you're testing in a environment, they're kind of responsible to make sure you're testing in a qualified and calibrated environments. So they're kind of the regulatory piece. So you need three- So I learned in my first two that I needed a CLIA lab. Now pretty much everyone the world seems to know what a CLIA lab is, but we didn't know what that was.

So I went to OSF to talk to them about, you know, would they prescribe the test? And what does a CLIA lab look like? And you know, McKinley and OSF are kind of conservative on- you know, they didn't, they're already really busy and OSF the hospitals are so busy, Carl wasn't interested in helping. And then all of a sudden, people start calling me because they heard I was looking and there referring and so I took calls in and over that three weeks. Oh, and then the vet the VDL was a little bit nervous about this, because they were expecting the African Swine Flu to come in. And they had contracted with the federal government that they would be one of the few sites in the nation that could test for this. And so they didn't want to be overwhelmed. So everyone was a little bit nervous. And then I went, and I figured out that we had now McKinley and we had the VDL. And we were making inroads on the CLIA getting OSF to be our CLIA directors. And so then I went to Andreas and I said Andreas, that we have all the pieces. And I said, but I can't do this anymore. I gotta run my job. It's been three weeks. And I think it's got to be under you because he had the budgetary power and I couldn't take time to go back and forth, consulting and putting in requests and stuff like that. And I said And I know who you should ask to and you should ask to lead it. I said, you should ask Marty [Martin] Burke. And so I said-, and you know, so now you may ask why Marty Burke, but we had part of our job was Marty was everywhere before that during the pandemic, helping you know he is an MD right? So, so he was trained to, you know, do ma- get people to make masks and get people to make swab sticks and finding and he was, and it was mo- he's so powerful mobilizing people this is one of the reasons I had to shutdown the stockrooms to make sure our stuff did not walk away, because I knew Carl didn't need it. They weren't overrun. And I said, just leave it here until someone needs it. And Marty was great. And I said, He's the perfect person to, you know, lead something like this, but he needs a project manager at his site. And I said Kraig Wagenecht, you know, would be really, really good. And Andreas had worked with Kraig on many things. And so then, and I said, we will help you, I promise the VCR will help you. But it's got to be under you. Because he has leverage over McKinley. He has leverage over everyone. And so he called Marty up that night. And Marty said, he'd talked to his wife. And he said, I'm all in within like, 12 hours. And then when I and when I talked with him, he already had a logo SHIELD. And he was off and running with Kraig, and Kraig is really- did you get to talk to Kraig?

**Sammi Merritt** 51:37

What's Kraig's last name?

**Susan Martinis** 51:38

Kraig Wagenecht.

**Sammi Merritt** 51:39

I don't think that we have-

**Susan Martinis** 51:40

He's the one person that I would add to your list, because he was in every corner of campus. And he's the one that went the longest without ever taking a vacation.

**Inbar Michael** 51:51

What was his last name?



**Susan Martinis 51:51**

Wagenecht, Wagenecht. He was in on the RapidVent- before SHIELD, I had him and Melanie Loots, who would be another really good person for you to talk to you. But I had him in all these meetings, like when they're doing the RapidVent because we're trying to figure out how we can help and facilitate and also make sure everything was in compliance. So he was in that it was either him or Melanie. But he ended up being the project manager for SHIELD and connecting with Jay Walsh, who was doing the FDA process he was kind of our go to. And Kraig and I would talk multiple times a day, you know, what do we need? How can we help? Where's the problem? What can- What should we do? So we just had, and then when Kraig needed more people for implementation, we went into our units to figure out how we can redeploy people. He was talking to the IDPH [Illinois Department of Public Health] he's everywhere, he's someone you should talk to. So Marty took over. And within a month, he's probably already talked to him, they had their Manhattan Project in May, they had this test, you know, set up, but then they and then we discovered that because it's a laboratory developed test, if we had CLIA directors and Kraig help, and we helped get all that paperwork in place, then we could just run with it, if it wasn't FDA approved, and I think Marty had a date right after the fourth of July set. And it was delayed by half a day because the printer didn't work. And so Kraig was down there, working with IT trying to get the printer to work while the dignitaries were all standing around because they were going to be the first in line to go through with this this test. And so that was the soft lunch. And then over the summer, we started trying to work at get FDA approval. And we thought we had it because of we were working with a consultant out of Indiana. And he advised us that it was fine because we were umbrella under the Yale test. And we went up. There's big announcement with Pritzker and Marty was on stage. And then we found out that wasn't true. And then there was some legal issues and the FDA came in. So then Jay Walsh kind of took charge of the FDA process and interacting with the FDA. And we did a lot of the lifting here to get the tests that we needed. It turns out, no one had ever really done this and we found out we could get FDA approval for symptomatic or non-symptomatic tests. And we really wanted non-symptomatic because that's what everyone you know had and that's where you learn stuff. But no one and every time we tried to do that the data were just screwy and I can remember Marty at one of those like 10 o'clock at night meeting and saying we just shouldn't go after this because the data doesn't make sense. There's something we don't understand about it. So we went after the symptomatic approval and, you know, eventually got it. But that was probably one of the hardest things this university's ever done. And then SHIELD Illinois was launched, to try and serve the state. And that was hard because a lot of the schools, they just didn't want to test, they didn't want to be bothered. And so you've probably talked to Ron Watkins, and he, you know, was all over the state trying to do this and trying to get the governor to Governor's office to give money. And then the system decided to set up a business called SHIELD T3 as a URO [University Research Organization]. And that was a little different feel, because they need to sell it, and they need wanted to make revenue off of it. And so they would enlist our faculty, you know, to go make pitches like Marty, and I think Marty was happy to do it. But then they want to trump people through the VDL. And so what we did, well the VDL was jam packed. I don't know if you've been there, it's jam packed, crowded. I mean, it was never meant for this. And at one point, when school started, in the fall, we tried to do 18,000 tests a day, and we almost broke, it broke the whole thing. And we had people like Tim [Timothy] Fan and the VDL director in there pipetting overnight, you know, to get it to catch up. And there's a window where you had to have the results back within a day, 24 hours or with the IT system, they just follow in, no one would hear. So we've learned what our max was we can do 18,000, maybe we could get up to 15,000 with three shifts.

And so we had, you know, we just kind of said, it can't come through the VDL anymore. And you really shouldn't be in our testing sites. It's like a clinic site. So we put policies around that. So we'll talk to whoever you want, but you know, you just can't, we've got an engine here and you can't disrupt it. So NCSA helped, SHIELD T3 get off the ground by building up the IT system. And while they were setting up their first trailer in Silicon Valley, for example, and going through all those early quirks and twitches, you know, they'd be calling up the people here, you know, at nine o'clock at night, or 10 o'clock at night to fix something because, you know, they had a glitch, and so we're very well connected to that. But by the following January, most everything had been kind of set up. And most of it was running. And now kind of the research, the research was running through, but then people started noticing and sending [inaudible] so that's ground zero through the launch.

**Inbar Michael** 52:06

The whole process.

**Susan Martinis** 52:31

Yeah.

**Inbar Michael** 52:36

So you actually mentioned Jay Walsh, who we conducted an interview with, and I did sit in on that. So I'm like aware of some of the things that he's done. And he is listed as a contact in C-ROC data and samples in take application. So what is the relationship- and I know you like just told us like a pretty long story. So like, is there anything maybe you missed about the relationship between the VCRI office and SHIELD?

**Susan Martinis** 58:10

Well, Jay is the vice president for economic development and innovation. So he reports in to the President Killeen. And so we worked really closely with Jay when he took- and then he was a conduit to also the Rockefeller Foundation. And also he was working with the our SHIELD team on there was the RADx program at NIH that developed, which provided money to get the test out into the commercial environment, so it would have impact. So we met a ton with Jay, he was in a lot of our think tanks. We were in his think tanks. Yeah, so I'm gonna have to go back and see why he was on the C-ROC because he wasn't on that committee. But because he was the what we call the principal investigator over the FDA application, he may be listed there in that capacity.

**Inbar Michael** 59:05

Okay. Great. Yeah. It's like nice to see how things come together when we interview people.

**Susan Martinis** 59:12

What one of the thing I hope you heard about was the mobile SHIELD trailers. So a young assistant professor Abby Wooldridge. Did you guys talk to her?

**Sammi Merritt** 59:20

I haven't heard that name brought up yet either, so I'm glad you're bringing up some people we haven't heard of [inaudible].

**Susan Martinis** 59:24

Yeah, she'd be a really good person to talk to. So she's an assistant professor and we always try and protect our assistant professors. But then in the system knew that they wanted to develop SHIELD T3 and had this idea to set up trailers that could go anywhere. They went to Abby, who's in Industrial and Systems Engineering, so she thinks about systems, how to connect everything. And so she started working alongside with Harley Johnson, Associate Dean for Research and Engineering. On a trailer that was parked outside behind the vet complex, and it was her that worked with some the early CEO of SHIELD T3 and some of their other people to design, how that trailer would be laid out. So she's responsible for the initial designs. And it was an important part of her other-. There's a lot I could say about that process. And how a woman needed to be, you know, a young woman assistant professor, you know, was working with other people from the corporate world, and some of the challenges she faced but she did a really good job and I don't think she's gotten the recognition that she deserves. It'd be great for you to hear her story and for her to get that recognition.

**Sammi Merritt** 1:00:45

Yeah, for sure. We'll make sure we reach out to her. Cause, yeah, this is the first time I've heard that name so far. So yeah, and I want to make sure that people who made important contributions like that are recorded in this.

**Susan Martinis** 1:00:55

Yeah.

**Inbar Michael** 1:00:56

What was her last name? Sorry.

**Susan Martinis** 1:00:58

Wooldridge, let's see if I can. If you look up under it's Abby.

**Inbar Michael** 1:01:05

Okay.

**Susan Martinis** 1:01:05

let me see if I can it'll just pop up on my email.

**Inbar Michael** 1:01:08

Even if I spelled incorrectly I'm sure if I look under like the professors that are a part of UIUC. Like it will be like, do you mean this name? So hopefully it will-

**Susan Martinis** 1:01:17

It's just Wooldridge, Wooldridge.

**Inbar Michael** 1:01:25

Okay. That was very close to my spelling.

**Susan Martinis** 1:01:27

Yeah. Abigail, I always have to look up her last name. It's Abigail or Abby. So that would be a really cool perspective. Kraig Wagenecht is a must person because the other thing I don't think I quite said this. But there was a point where our faculty needed to get out of the, you know, running the show business and go back to the work that they were meant to do. And so Kraig took over as the project director, program manager, reporting into- he was still mine, but he was reporting in Andrea's for that. So he did that for another year and a half to ramp down enough that we thought we could get him back to other projects that he's doing. Can I give you one third person I think would be really good for [inaudible] Melanie Loots.

**Inbar Michael** 1:01:32

That name sounds familiar.

**Sammi Merritt** 1:02:10

She's on our list. Yeah.

**Susan Martinis** 1:02:11

Okay, good. She's my [inaudible]. She's my right hand. And she just- she's been in this office for a long time. And she just has a really great perspective. And she's one of those quiet glues that hold everything together. I think you'd really enjoy her perspective.

**Inbar Michael** 1:02:30

That does sound the name does sound familiar. Okay. I know that we have like, yes, it's 2:50. So I'll ask one more question from like, our, like main chunk of questions, and we'll do a couple of like, winddown ones. And then that's how we'll wrap up the interview. How does the VCRI office decide who gets to access the COVID-19 data and biological samples that are collected and owned by UIUC?

**Susan Martinis** 1:03:01

Yeah, so this, so I take it advice from that C-ROC committee, and they decide if it's important work. At the time, it was important work that we should allow access to our samples, that would you know, be impactful to the pandemic. So that was one thing. And you know, in the couple cases that got turned down or delayed, it was, they didn't feel like the work was far enough along, like a test someone was developing, there was some other things they could do before they needed to access our samples. And we didn't know how long the pandemic would be going on. So we're really careful about how much we dispense. I'm a molecular biologist. So I had a pretty good idea of how much they needed. And I'd say, Yeah, give them you know, 25 microliters. That's enough to scrub twice and then keep going. And then so it needed to be, you know, well thought out experiments, sometimes they'd ask questions and go back to the person who was developing the test or one of the data. And then we kind of, were really careful with external people even there's really prominent researchers that wanted to use it, and we just didn't feel it was the right time. The NIH study, though, we thought it was very, very important. We also set up a vaccine study here with their infrastructure. That was hard and but one of the things we set up a Carl Illinois College of Medicine, right? We did that, to do this kind of research. There's still you know, they just graduated their first class and they're not research intensive at all. But I can remember my

colleague Melanie Loots, saying, Well, this is amazing. We set up the Carl Illinois College of Medicine to do exactly these types of things and we're learning how to do it. We're learning what kind of people we need over the long run. So that was really fun to think about that connection.

**Inbar Michael** 1:05:09

So they were kind of involved with the Vaccine?

**Susan Martinis** 1:05:12

They were not, but we learned what we're going to have to add, because we had to have someone validating for these students in isolation that they were doing the test. And so we actually partnered with Massachusetts General Hospital in Boston, to who would go on a [Zoom box] and do it because we didn't have those clinical type of researchers. So we learned that our next steps are were which was, which was really exciting.

**Inbar Michael** 1:05:43

Great. Okay, we'll move on to some winddown questions. Um, so you did touch a little bit on how your experience in education as a biochemist has kind of like helped guide your work. But were there other things you wanted to add about how it has helped you throughout this pandemic?

**Susan Martinis** 1:06:00

Um, you mean my own experiences? Yeah, I think well, within the lab, this is the kind of work I do. I was in a biotech company with where I went- so I got my PhD here in the 80s. I think I mentioned that you know, we were in the Beckman Institute. So, and then I went to MIT, and then I went into Kendall Square in a young biotech company. So I learned a lot about, you know, lead development, corporate interest, patents, writing corporate profiles, how to set up a business. I was there for three years before going to Houston where I set up my own lab and went back into academia, those kinds of experiences. And the type of work that I do in my lab were really useful as they're developing the test. Thinking about the FDA studies and how to move that forward, someone could come to me and they couldn't really, I'll just say, snow me necessarily, because I had that kind of, I had enough of that background that I knew some of those questions to ask. So, you know, it's kind of your- the education comes through a lot of professional development in your experience. And the other thing is, I learned tremendously through the process, like I told you, we started- I always go back to this, we learned from our animal caregivers what to do in a disaster, because they had to have a plan. And every snowstorm, or any natural disaster, they you know, have to have to deal with that, because those animals need to take need to be taken care of.

**Inbar Michael** 1:07:40

Right. Excellent. Okay. Um, so it says that you're listed as an author for the Mitigation of SARS-CoV-2 transmission at a large public university. What role did you have within this research?

**Susan Martinis** 1:07:57

Well, there's about 120 authors on that. And I was part of a lot of think tanks implementers, but I'll tell you something that I'm really proud of there. So I still have a research lab, but it's small now. I'm an administrator, and Marty Burke is right down the hall his lab is next door to mine. So I've known him for

years, in fact I helped him get an affiliate appointment in the biochemistry department when I was headed the department. And I certainly know Paul Hergenrother and Tim Fan. So when you're doing a publication like that, your first authors are usually the ones that actually did the work in a lab in our discipline. So the first six or seven are actually holding the pipettes and the samples and doing that. Yeah. The last authors are kind of the faculty principal. They're the PIs. And so if you look carefully at that publication, it's Paul and Marty, and Tim. And then in between, you know, it's really hard with a hundred people to know how to do. Well, we put all the administrators on there, but they put me closest to them. And to me that that was, I don't know if I've told them the ship, but that was so gratifying to me, because they still saw me as a colleague, researcher, that had impact that not just an administrator so. I guess what my role was in that I did a lot of work, you know, implementing, facilitating solving problems with logistics, but they still saw me as a researcher, because they put me so close to that inland. So thanks for asking that.

**Inbar Michael** 1:09:37

Yeah. Great. Okay. I'm just checking the time. I think we've said three. I don't know if you have like something right after so I-

**Susan Martinis** 1:09:44

If you have something else, I'm good. I have to go in a few. I gotta fix a computer problem, but go ahead.

**Inbar Michael** 1:09:49

Okay. Sure, we can wrap up with if there's anything that like, you've learned about this pandemic, like Whether it be about yourself or your work, or the university itself, or like, your thoughts on the university's response overall, just like final concluding thoughts, yeah.

**Susan Martinis** 1:10:09

So for myself, I love the work. I work a lot, it's fun. But I think I told you, I learned that there's got to be a point where you just shut down. And to this day, I get home on Friday night, and about seven or eight, maybe you know somewhere in there, sit down, turn on the TV. Otherwise, I [rarely] watch TV. And then we just do that. And then you know, Saturday, I start working again, at some point. I'm also a mom with three kids. And so in a life, so you know, that there's always some type of work to do. But there's just a point where you can sit on the couch, and watch TV. So that's something I learned about myself. The thing that I learned about this university that we're all very proud of is how we came together to get this huge thing done. And I think better than any other university, that doesn't mean that it was easy. I mean, there was some difficult, very difficult periods when we disagreed about what should be done, when things seem to get out of the line, when someone took off running too fast and forgot about X, Y, or Z, and we had to pull them back. But because of that, it's like a family when you go through crisis, and you get through those times, where just, you just developed a real respect for your colleagues, and everyone has their, their weaknesses and their words, and you just overlook that because we all came together to make, you know, this amazing thing happen. And we kept pushing ourselves and growing in new ways. We didn't just have to stop at the test, we help the state and then we help the system and SHIELD T3, so we just kept going. And, you know, you just saw how I talked about me working a lot. Everyone stretched themselves, beyond what you ever could think would be happen, or that could



happen. So yes, that's what I learned a better university how far we could go to solve such a big problem. And I have to say losing Greg Gulick was I was just getting to know him as amazing person. And when that happened, that was so hard for all of us, because it's like this is what we're working for is to save lives and you know, we lost him. We don't think he picked COVID up on campus. But he picked it up probably from a family gathering, but I can still remember that- I still have a text to him. When he was in the hospital saying you know, we got things covered here. Don't worry about the IT we'll be fine. And then you know, and then he wrote back and he says things are looking better. And then it went downhill so I just kind of that's a sad note to end on. But it just that's why we did this to keep people safe. And we lost Greg and that's one too many, but we saved a lot of other people.

**Inbar Michael** 1:13:13

Absolutely. Yeah. Thank you so much for your time.

**Susan Martinis** 1:13:16

Yeah, this was fun. I've been eager to do this and I'm just sorry it took so long.

**Inbar Michael** 1:13:20

No worries.

**Susan Martinis** 1:13:21

You were patient.