Project: Documenting COVID-19: Stony Brook University Experiences
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Narrator: Silvia Spitzer (SS)
Interviewer: Chris Kretz (CK)
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Summary: Dr. Silvia Spitzer is the head of the Molecular Diagnostics Lab at Stony Brook University Hospital. In this interview, she describes the operations of the lab before and during the pandemic. She discusses the challenges involved with testing in the early stages of the disease as well as the issues the lab faced with staffing and supplies as well as working with outside agencies.

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CK: Today is Wednesday November 4, 2020. This is Chris Kretz for Stony Brook University Libraries interviewing Dr. Silvia Spitzer for the Documenting COVID-19: Stony Brook University Experiences project over Zencastr. Dr. Sptizer, thank you for sharing your experiences with us.

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SS: I'm glad that I can join.

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CK: Let's start with—can you tell us what your position is with Stony Brook and how long you've been working here?

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SS: All right. So I am the head of the Molecular Diagnostics Lab. That is a section in the general laboratories that deals with molecular testing—meaning testing that involves nucleic acids.
I started this lab more than twenty-five years ago and I've been in Stony Brook for thirty years.

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CK: And can you give us a little more sense of day to day, what kind of work the lab is involved in?

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SS: (Both talking at once). We used to do (laughs). The lab is involved in doing a little oncology, genetics, and microbiology. In the oncology area—just to give you an idea—for example, people that have leukemia have mutations in their genes, translocations that lead to cell growth and cancer. So we look for those mutations, for example, in leukemias.

We do a lot of microbiology testing like HIV and HCV, chlamydia, gonorrhea, C. difficile, MRSA. We look for the presence of certain sequences that are characteristics to the virus or bacteria. And we also look for some genetic mutations. Once again, these are inherited mutations instead of mutations that happen afterwards, like in cancer.

Our lab was, in a way, the lab that was going to be doing this type of testing for COVID because we are prepared to do viral load testing and viral testing.

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CK: And just to clarify: all that testing you were just mentioning—that's in service of the hospital, hospital patients, and that sort of population?

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SS: Yes. What happens with our laboratories is that the laboratories are internal. We do not have a reference area—in my laboratories at least. So we do all the inpatient testing and maybe some of the outpatient clinics, but not much. It's mostly the in-house population.

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CK: And if you think back to or—I won't give you a date. When do you first remember hearing about COVID-19 or coronavirus?

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SS: I would say that around the first week of March. We started hearing about worries that a patient was admitted to the ED [Emergency Department] with some symptoms that were consistent with COVID and they needed COVID testing.

In the beginning, everything was being sent to the Department of Health. That was the only place authorized—that and, of course, the CDC [Center for Disease Control and Prevention]—to provide this type of testing. There were no other laboratories in New York State that were doing the test at the time. As more and more we started hearing [about COVID] and we knew what

happened on the other coast of our country, we thought we need to look into setting up this test in-house because a tsunami is coming.

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CK: Were you in touch or—how were you tracking the development of the disease?

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SS: We have weekly meetings among the people in the laboratory. The head of—I mean, the vice chair of the laboratories will tell me. My lab is involved in—whenever we have to send something viral to the Department of Health—in packaging and providing all the [specimen's] information, and there are special forms that need to be filled out..

So we knew how many specimens were being sent. We knew the results because we had to print out the results when the results came back. We were aware of what was starting to happen.

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CK: Is it a difficult test? Or how would you characterize the test itself?

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SS: The test itself is not difficult because we are a high-complexity laboratory and all the technologists in my lab are prepared to do this type of testing.

The main concern that we had from the very beginning was that, number one, you may remember the CDC test was not working well—had some problems—and there was no other test available in the market. So we were kind of left to our own devices to figure out how to solve this problem.

And second, then, we don't have automation to perform these types of tests. It's a very laborious test. I wouldn't say difficult but laborious.

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CK: So what did you have to do to ramp up, once you realized testing was needed? What kind of challenges did you face, and what decisions did you make?

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SS: This is something that—I have to be careful here, but I didn't decide many things. Many things were told to me that needed to happen. For example, one of the things was how we're

going to manage all this volume of patients that need to be tested with the same personnel and the same resources. You know, meaning the equipment that we have.
I was told that I had to allow students and—especially they chose MD PhD students. This is not something that I decided, but I was told you can use the student [in the lab]. I have to say that the Department of Education allowed for students that have a biology background to work in the lab at this time because it's an emergency. So it's not against the law.

I got help from those students, but they—you know, very bright and everything. But they are not used to working in the lab. So it was a very challenging time for everybody to have all these people in the lab, trying to learn, trying to make it work with the limited space also that we had and most importantly with limited resources. This is something not only because of Stony Brook, but because of not having enough [testing] supplies for anything in the country.

And in the beginning [everything] was—even the swabs and the collection tubes—they were in short supply. We couldn't even provide that. It was really very, very challenging. We spent hours and hours calling all sorts of different vendors, trying to find out what kind of tests we could do, what kind of media, what kind of swabs [were available]. Checking with the CDC if they will accept it. With the FDA [Food and Drug Administration] if they would accept those tubes. It was really maddening.

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CK: So how did you find—how did you cope with it? Did you have any routines or—

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SS: I didn't cope with anything. I just came here and only this month—well, last month—I started not to come on Saturdays and Sundays. But I came absolutely every single day. If there was a problem at ten at night, I will come back and help.

I think that everybody just got strength from I don't know where, and we just worked. We just called around, tried to see what other laboratories—especially in the New York State area—will do so we would have at least the same tests available for all our patients. And we just kept going.

Fortunately, many patients didn't—regular patients let's call it, if there can be that term—didn't come to the emergency room or for regular appointments. Because, you know, everybody was scared of the COVID, and the hospital and doctors' offices were closed. So our volume for other tests like HIV, HCV, all those things, decreased a lot. We could dedicate ourselves more to COVID testing than to the other tests.

We were able to turn out the results. I have to say that we always gave results within a few hours. We never had this backup that you hear in other places. So we were always able to help

with the managing of the patients. And if they needed to be admitted or released, we would give the results in a timely fashion.

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CK: And can you describe more—what did the lab feel like with the people you were working with? How did you keep everyone going?

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SS: Well, that's something very difficult also. Even till today they are kind of upset because it's always easy to forget that the lab is here in the basement and, you know, people just want the results. The results come. Okay, they are happy. It doesn't matter if you have to come Saturdays, Sundays, evening, overnight. It's a lot of work to make sure that every single shift is staffed correctly.

It was nice that at the time there were this group of people—I don't remember from where. I think they were called the Lavender Group—something like that. I called them and I said, You have to do something nice for the people in the lab. So one day they sent, you know, like a care package for everybody with some candy—which was very nice—and [a] thank-you note.

Because you know, all the healthcare workers were being thanked and recognized and given food and all these things. And here in the laboratory nobody was even acknowledged. We didn't have a single person come to the lab to find out how we do it or take a picture to document what was happening. That's why I'm very grateful that you're doing this, and I have an opportunity to show that we were also involved in this time.

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CK: And could you give us a picture—describe for us where the lab is? And maybe how did it—did it change physically? Did you have to make any changes during this time?

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SS: My lab is located in the hospital. It's in the basement on the second level. But all the labs, the rest of the labs—chemistry, immunology, microbiology, everything—is on the third level. Since the very beginning, I had to go to the second level because there was not room in the third floor to have my lab. So this is [the] number one problem. Specimens are received in Specimen Receiving—that is in the third floor. And my lab is in the second.

So every fifteen minutes people have to come upstairs to pick up specimens. This creates a lot of unhappiness because it's okay to come once or twice but when you have to be going up and down the stairs all day long, it's quite tiring.

There is a lot of repetitive motion of things that we have to do. Setting up reactions, you have to pipette a lot. You have to open and close tubes. So people's arms started getting tired. People's fingers started having problems. I have one tech that is on leave since June because she has an elbow problem.

The other thing that is very challenging also is managing the phone. We have to answer, constantly, calls from all over the hospital, When is the result going to come out? Why the specimen was done or not done? It's very tiring to be in the lab at this time.

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CK: And how did COVID affect your life outside of the lab?

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SS: Outside of the lab, I feel like I am shut down. In a very strange way, I am thankful for coming to work and interacting with other people because I feel that—now it's better, as you know. You can go out more. The summer was better also. But besides going out for walks, you cannot meet friends. Everything is via Zoom. I feel like I missed birthdays and get-togethers.

It's a time that—I know everybody feels the same way. And also [I feel] a sense of sadness that many people lost their jobs or they are struggling and we don't see an end in sight yet.

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CK: You mentioned the walks. Were there other things you found that would at least distract you or help you with your own health?

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SS: Also via Zoom, a lot of exercising. Especially Zumba—listening to Latin music and dancing makes me happy. Those were the two things that I kept doing.

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CK: Was there anything that you look back on that—what surprised you in terms of the experiences? Either for the better or for the worse.

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SS: For the better is the strength of the people and the willing to do the testing and keep going and do the best that we can with the resources we have. And the bad thing is the involvement of people that never got involved in the laboratory decisions and that made some decisions that are till today very difficult to reverse. We still don't have automation in the laboratory, for

example. And this is something that was decided—not by me. That part, I think it's—it really surprised me.

I know that we are not in just the hospital, we are in the university. And there are a lot of students and now we need to find out how to test for all those students. I know that you need to set up something for the students but I was never included in those discussions or even asked how can I make my lab better or what do we need. And so it was always—they may think that they did but it was always a phone call, You have to do this. You have to do that. It was never a discussion of what works better or, Do you need more space? What kind of equipment would you like? So those things I think were missing.

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CK: We're still, talking in November, still dealing with the virus. How has the operations of the lab changed—or do you look at the virus differently than you did in the beginning?

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SS: I look at it different than [in] the beginning because in the beginning we were really all very scared of working with it. We are still very respectful—I don't want to take that away. But just to give you an idea, we had two weeks where I thought that we had contamination.

Almost 80 percent of the specimens we would test were positive. And we will retest them and it was still positive, so it was not a contamination. But just to know that all the tubes that you open are infectious is really sobering.

So gowning to go to work—under the hood—was taken very seriously. Now, we don't have that many positives. We are around 1 percent. We are a little more relaxed in the way that we approach—still we double glove. Still we take care of all potential contamination. But it's not the same to know that 1 percent of your specimens or 2 percent are positive than 80 percent. That was very serious.

We continue to constantly clean and spray the surfaces and change gloves and wash our hands and wear masks and everything that you can imagine.

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CK: Had that been part of the routine before COVID, or was that a new step?

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SS: Before COVID we always worked under the hood because we had the microbiology area. I mean, we had HIV—that is also something to be careful about. We always wore gloves but now we gown double. We double glove.

And of course, the mask. The mask is a very big challenge—to work with a mask all day long. People will get headaches or when you wear glasses, they will fog. So it's really very uncomfortable. But of course, we have to do it.

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CK: Just to go back to your routine, would you say you were coming in pretty much—how often?

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SS: Pretty much every day around five thirty or six in the morning. And just stay till five and then analyze the data the next day. Or sometimes come back and analyze data or if someone—when you have two people working in the night shift, for example, and one gets sick or has an emergency with a kid—now you have only one. You cannot have just one person handling going up and down the stairs, answering the phone, and setting up the test under the hood when you're gowned. You need a second person. So I will come back and help some more.

I have to say also that during the worst, worst time—I think it was in May—the residents of our department helped with the overnight. We had at that time—all the country—we started having a simple test that is not high complexity, that is all contained. The extraction, the testing, and the results are even interfaced. So we had help from the residents to do that. And that was very nice.

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CK: So when you look back on all this, what is it that sticks most in your mind? Or what would you want people to know about your experiences?

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SS: [pause] I think that—I don't know. Sometimes I try to think how great we did and how we responded. And then you talk to other directors from other labs and we are more or less in the same boat.

What surprised me the most was the strength of the people in my lab that worked so hard. And by that I also want to include our supervisor that—like I said, the number of calls and still till today she puts together kits of swabs and media to collect the specimens. The amount of help that we had in that sense—it was really fantastic.

But I felt very lonely. I didn't have anyone to bounce back ideas, to have any help. The Department of Health—the office of Cuomo at one point had a nice meeting with all the laboratories in New York State. And it was a very hopeful time. He talked also, and he promised that he will get us more equipment or even reagents. Just enzymes—we didn't have even the

reagents to work. And then when it was time to get the things done, we got nothing. We got absolutely nothing. I have to say that all the resources went to the people in the city.

Columbia, Cornell, NYU, Northwell. Northwell [Spitzer clarification: Mount Sinai prepared very well] prepared very well also in advance. They had meetings in advance, and they started buying supplies in advance. They knew that this was coming. Mount Sinai. All the resources went there. We didn't get any help.

I think that that was very sobering, to see how isolated Stony Brook is from the rest of the hospitals.

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CK: Well, we want to thank you for all your effort and for talking with us today. We appreciate it very much.

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SS: Okay, thank you.

[end of interview]