CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON FINANCE

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B E F O R E:

COUNCIL MEMBERS: Ydanis A. Rodriguez
James G. Van Bramer
Vanessa L. Gibson
Robert E. Cornegy, Jr.
Laurie A. Cumbo
Corey D. Johnson
Mark Levine
I. Daneek Miller
Helen K. Rosenthal
Steven Matteo

A P P E A R A N C E S (CONTINUED)

Maria Gotsch, President and CEO
Partnership for New York City

Dr. Eva Cramer, Vice President Biotechnology and Scientific Affairs Downstate Medical Center

Dr. Piraye Beim
Founder, CEO & Chief Scientist
Celmatix

Dr. Kate Rochlin
Co-Founder and Chief Scientific Officer
Immunovent

James Moore (sp?)
Founder, President & CEO
Biogenetics (sic)

Chris Marshall
Founder and CEO
Avatar Biotechnologies and Avatar Medical

Jeffrey Wang

[sound check, pause]

[gavel]

CHAIRPERSON FERRERAS-COPELAND: Good morning and welcome to today's hearing. I am Julissa Ferreras-Copeland and I'm the Chair of the Finance Committee. Thank-I want to thank everyone for joining us today. After a long night, the New York Mets won. Yes. (applause/applause) I am really excited to have them both in my district and that they are great winners. So we are excited to bring them home, and for us to take it all the way through. But we won't talk about that because we don't want to jinx anybody. Today, the committee is holding a hearing on proposed Intro 956-A sponsored by Council Member Garodnick and myself. Which is a local law to amend the Administrative Code of the City of New York in relation to extending the biotechnology credit against the unincorporated business tax and general corporation tax. Yes. Before we begin, I'd like to thank the staff of the Finance Division for their preparation of this hearing, specifically my Chief Counsel Tanisha Edwards, Assistant Counsel Rebecca Chasen, Deputy Director and Chief Economist Dr. Ray Majewski, and Principal Financial Analyst Paul Strom.

New York City's Biotechnology credit was first created in 2009 and it is currently set to expire on December 31st, 2015. Proposed Intro 956-A would extend the availability of the credit for an additional three years through December 31st, 2018. Biotechnology is a form of technology involved in the scientific manipulation of living organisms to produce--produce products conducive to improving the lives and health of plants, animals and humans. This includes research on new drugs, medical devices and diagnostic tests. The New York City Biotechnology Credit is a refundable credit of up to $250,000, which is available to small New York City based biotechnology companies. The intent of the credit is to assist new start-up firms that are researching new ideas and developing new products to help create a vibrant industry in New York City such as the City-so that the City--such as the city becomes a good place to make a career in biotechnology, and locate the kind of ancillary services that the industry needs. The number show that these policies are working as life science is a growing industry in the city. In 2013, 28 small early stage firms claimed the biotechnology credit--credit totaling approximately

$2.4 million in credits. Also in 2013, the average wage of life science related jobs in the city was over $78,000. And of the number of the life science related jobs, 12,785 a 14.4% increase since 2010, similarly the number of biotechnology establishments reach 931 in 2013, a 7.3% increase from 2010.

While these numbers are encouraging, we as Council must also remember our responsibility to spend taxpayer dollars responsibly. To that end, I am chairing the Council's taskforce on economic development expenditures of which Council Member Garodnick is also a member of, that will ultimately recommend an institutionalize review process to evaluate the effectiveness of the city's economic development tax expenditures including the Biotechnology Tax Credit. While the council has already undertaken inter review--internal reviews of these various tax expenditures, we can expect to see more public rigorous reviews in the future to ensure that expenditures are working to their intents-the intended effects and the city is employing its resources efficiently.

Today, we will hear testimony from members of the biotechnology community who have

benefitted from the tax to learn more about how the credit has contributed to their ability to flourish in new York City. Before we hear testimony, I would like to open the mic to my colleague Council Member Garodnick to say a few words.

COUNCIL MEMBER GARODNICK: Well, thank you very much Chair Ferreras-Copeland. It's always a pleasure to work with you, but this one is a particularly important initiative. So I thank you for holding this hearing, which as you noted will extend the Biotechnology Tax Credit against the unincorporated businesses tax and general corporation tax through December of 2018. Biotech is emerging as one of the most important sectors in the world's economy, and our city is in a unique position to take advantage of this. We are home to 59 hospitals, 900 life science companies and fast growing start-up scene. Our city received $1.4 billion in research funding from the National Institutes of Health, and biotechs--biotech companies bring advanced research and development into the city creating middle-class jobs and tremendous innovations. These small emerging businesses face several challenges. There's a scarcity of laboratory space, rising rents and high

energy costs. To help, the City Council passed the Biotech Tax Credit first in 2009. The tax is a refundable credit against the taxes that I noted above. Its purpose is to help offset the costs of equipment, research and importantly, training for small biotech businesses in New York City. The money saved goes to patents, space, equipment, training and more. Recent startups can receive a maximum of $250,000 a year and pre-existing companies can earn up to $125,000 in credits under certain conditions. This represents huge savings for small companies. Twenty-eight companies took advantage of this tax credit in 2013 up from 23 in 2012. In 2013, the 28 applications totaled $2.4 million in biotech credits. This tax credit works, and we should continue to foster a healthy environment for biotech startups. This tax credit is about keeping New York strong in our rapidly growing biotech sector. The resources pave the way for New York to continue to lead in this industry. So again, Madam Chair, thank you again for holding the hearing on the bill, and I look forward to hearing from the panels today.

CHAIRPERSON FERRERAS-COPELAND: Nice said. Thank you, Council Member. We have received

written testimony from the New York City Economic Development Corporation and it will be submitted for the record.

FEMALE SPEAKER: The first panel of witnesses will be Maria Gotsch from the Partnership Fund New York City and Dr. Eva Cramer from SUNY Downstate.

[pause.]

MARIA GOTSCH: Good morning and congratulations to the Mets. (cheers) Thank you very much for holding, actually for holding this hearing on what we at the Partnership for New York City think is a very important topic and a very important industry to support for New York City. Just a quick background to give you the context. The Partnership Fund is a private fund of money from large corporations and individuals with the mission to create jobs in New York City. And we invest in-- (coughs) excuse me--in low-income neighborhoods, social and non-profit businesses, and spend some time also thinking about how to support the growth of new sectors in New York and biotech and life sciences has been a major focus area of ours. Our fund is about $115 million, and we've committed over 40% of that

fund to supporting the growth of the healthcare sector in New York. So it's been a really, as I said, a very big priority for us. So, this tax credit is, as was mentioned, supports a very important growth sector, but particularly why bioscience is so important for New York City is that it really leverages all of the investments that have been made by our academic medical centers on the research side. So we receive the second highest amount of funding from the federal government for biomedical research. But we don't commercialize those jobs as well as we should and can in New York. But the other important reason to support the biotech industry is that it creates good middle-class jobs. The average salary is about $70 to $80,000. New York City has lost 100,000 middle-class jobs over the last five years. So finding and identifying industries where we have a good shot and good resources to grow these kinds of job is very important. And the thing about life science jobs is they have a stickiness. So once a company gets settled here, they build out their lab space, is actually a barrier to leaving because lab space is expensive to building, but it also means it's expensive to move. So if you can get

the company started here, you've got a good shot at keeping them here as they grow and create those middle-class jobs. It also--this tax credit supports significant investments that have been made by the city on the real estate side. So between the Alexandria Center, the two projects in Brooklyn that my colleague, Eva Cramer is going to speak about, the Harlem Bio space up in Harlem. Now, we need to make sure that those properties are filled with good early stage companies that spin out of our universities. And why is this credit important right now? A couple reasons. The first is that over the last 18 months, New York City has had new private capital from venture capital funds form outside of New York who have come to the city who are now looking to invest in companies. The Accelerator Corp has come from Seattle, Versant has come from Europe. Deerfield has raised a new fund focused on early stage science, and then the city's initiative with flagship and arch there are all big pools of capital that are now focused on New York City. So this tax credit supports them, and importantly not only with cash, but it's a very important signal that the city is sending that this is an important sector for us.

We're going to partner with you. We're going to provide you with supportive capital. And then the last thing I want to just mention is that the structure of the tax credit is very smart. There's a very good private sector overlay to it. It doesn't last forever. It gets companies started. It skews it towards early stage companies, which is when they're at their sort of most vulnerable risky stage. It gives them the support they need, but also very wisely supports that are growing, and you're not growing, you get a little bit less money, and that is exactly what the private sector does. It picks the winners, supports them with more money, because those are the ones that have the best chance of growing and creating the jobs. So I applaud you for this. I'm happy to take any questions on the industry of this credit.

[pause]

DR. EVA CRAMER: Thank you for inviting me. My name is Dr. Eva Cramer. I'm Vice President for Biotechnology and Scientific Affairs at Downstate Medical Center, and I am the President of two non-profit organizations, the Downstate Biotech Incubator that you can see here, and the early stage companies,

and Biobat at the Brooklyn Army Terminal. For companies that outgrow the incubator as Maria said can stay and grow from 5,000 to 100,000 square feet. Thanks to the borough presidents, the City Council, the state and the federal government, we have received funds to build out these two locations. They are critically important because as Maria said, there was a tremendous need for affordable biotech space in New York City. The incubator is now 50,000 square feet. We have 20 companies in that space. It provides modular lab and office space, a core facility and conference rooms for our company. It even has a little nursery program for really very beginning stage companies that need just a bench or desk. The wonderful thing about being close to the university is that they have access to working with our scientists, our clinicians. They can use the library, and they can use special resource--research facilities at the university. When they're big enough, they can also do clinical trials with our physicians. We have an entrepreneurship course for our companies, and workforce development companies. So that we develop the skilled labor force that's needed to help these companies grow. Those programs

together with Hunter College it is a workforce development for undergraduates to teach them biotechnology skills to be technicians to work with our companies. When the companies outgrow the Incubator, they can move to Biobat at the Brooklyn Army Terminal where they can grow from 5,000 to 100,000 square feet. [pause] Biobat is 524,000 square feet. It's being developed in phases. Phase 1 was 38,000 square feet and it houses three companies, the International AIDS Vaccine Initiative and Avatar, both vaccine development companies and this--Marshall from Avatar will be here to speak, and Modern Meadow, which makes cultured meat and (pause). Phase 2 is now 85,000 square feet, and you have to come visit. He has come and seen it. It's a remarkable--

COUNCIL MEMBER GARODNICK: In fact, I just have to take a moment to describe the--the situation where you are growing animal cells--

DR. EVA CRAMER: [interposing] Right.

COUNCIL MEMBER GARODNICK: --and making that hamburger--

DR. EVA CRAMER: [interposing] Yes, it is.

COUNCIL MEMBER GARODNICK: --which to me is--I--I don't even know what to do with that. It's kind of incredible.

DR. EVA CRAMER: Well, they--the wonderful way--and weather, (sic) too, yes. The wonderful way to think about it is if you're going to the moon or--or Mars, you can't take a cow with you, but you could take a biopsy. So meat is skeletal muscle. So we take a biopsy of skeletal muscle. You can keep it frozen in liquid nitrogen and when you're ready to grow meat, you put it in tissue culture and you just grow as much as you [pause]

MARIA GOTSCH: The best part is I moved here from Saint Louis, Missouri. So we attracted a company.

DR. EVA CRAMER: Yes, we attracted a company. [pause] So, yeah, actually if I--if I just skipped right to that and that is that these credits are incredibly important to us. You know, New York had the reputation of maybe being not that friendly to companies and that it was very expensive. So having affordable space and the incentives turned around the way people are thinking about coming. Both these sites now are in tax-free zones. They're

part of the Start Up New York Program, but your program that you're initiating gives them cash. As Maria was saying, the little babies really babies really need that. It takes a long time and a lot of work both from an idea to bring it to the marketplace. Especially at the beginning they're really vulnerable and there aren't that many people and they try to do everything. They're trying to raise the money, do the science, market it, everything. So having this type of funds is so important, and I can tell you from the people who are now coming to look at our space they are saying New York is in the business for biotech. It really has turned things around. It's terrific. Thank you for doing this and it's tremendously helpful.

CHAIRPERSON FERRERAS-COPELAND: Thank you very much for your testimony and I, you know, I can't say this enough, but the leader of creating and helping create this and to push it and to making sure that we--make sure that this Council is focused in protecting this credit is Council Member Garodnick. He's been working on this since 2009, and to be able to be here today, and to really push it along for three more years I think is something we really need

to acknowledge from the industry but also from the Council's perspective. So I'm really honored to be able to partner with him on this. So I wanted to ask two questions, and as mentioned both Council Member Garodnick and I have been figuring out how best to evaluate these incentives, or expenditures. If we had to kind of fast forward and make--imagine that we are in--three years later, what do you think within your industry is the best way or the most-- We can measure jobs, but is there something else that we'r4e not measuring that can or prove success in the industry that should be included in our evaluation process as a Council?

MARIA GOTSCH: Well, I would recommend you also include the dollars that they raise from private sector investors because you're coming at a very early stage. Some--you've got sort of fearless entrepreneurs who are willing to take the risk. Sometimes they can get professional venture capital money. Sometimes they're raising it from individuals. But three years is enough of a runway for most companies to start to prove that their science is working. And if the science works, then they can take it to a private venture fund and raise

additional dollars. So the--in its very binary,(sic) you either, you know, meet the scientific milestones and then you can typically raise money, and if you don't meet the scientific milestones it's very yard to raise additional money. So I would add that as additional, and then that gives you private sector validation that these are companies that were, you know, that sort of met the milestones, and were advancing.

DR. EVA CRAMER: You know, I would also add that raising money from other sources such as from as NIH and SBIR grants are ways of raising money. But showing that I think either they're getting more patents, their--their science is moving forward. I think that showing that science is moving forward is a really important aspect.

CHAIRPERSON FERRERAS-COPELAND: Now, while I know you didn't mention the nursery, which is even bigger before you get to small--

DR. EVA CRAMER: Right.

CHAIRPERSON FERRERAS-COPELAND: --both Dan and I have small children so we also know the importance of going from nursery to pre-K and all the way up. How do we support the medium size, right?

Because we also need to understand that we are--I'm--I'm--does the medium size need the same support, a different type of support, or how do we know--or how do we tell the growing business after you've moved out of the three-year break. What else can the city do besides suggesting another tax break, right? How else can the city support the medium size and then hopefully go get them to be large and still remain here in New York City?

DR. EVA CRAMER: You know, they still need more money. So I mean it's very important to understand that taking a drug from an idea to the marketplace is a very--it takes a very long time, and it takes a lot of money. So, if this could be--if companies that already have had this, would be allowed to another three years that would be wonderful. But in addition, the other thing that we need support for is kind of fit out for these companies once they're going to grow from our Incubator over to Biobat. They need now to be able to expand, and they need funds to help them expand in that space.

MARIA GOTSCH: I'll just echo the bit about the--the bit about the space. We have made

some very good progress on space, but there's still, as you talk to the market, are gaps, and that sort of--you've actually put your finger interestingly on where there still is a gap. And that's--it's called step out space. So you've got some good incubator space, but then if you want to have affordable space, so you haven't raised your $50 million venture round. You're still kind of at the $5 to $7 million round. You need to have a private office because of the nature of your science, and you want to have, you know, and you don't have two employees, you want to have probably five to seven. So continued investment sort of focused on good projects within that space would make sense.

CHAIRPERSON FERRERAS-COPELAND: Great. And I thank you for speaking on the partnership with the SUNY Downstate and Hunter College. But in this Council we--we often speak about everything, and one of the biggest challenges that we have is our city is very diverse. And what can the industry be doing more to diversity the opportunities? I want to say diversity. It includes women, it includes people of color. We have funded several initiatives from the younger--young kids from junior high to high with

Urban Advantage, which is a partnership with middle-schools understanding sciences through collaborations between urban public schools and science cultural institutions. So we'd like to see an opportunity to do better partnership in that way so that we can create the pipeline necessary. Do you have any examples of that, or opportunities where you can see some pipeline opportunities?

DR. EVA CRAMER: So the model program is in Biobat. It has just move into Biobat and we just met with them about forming a model STEM program with them. They set it up as a model and we need funds actually for it. So, to set up this model program, which then could go to all pre-K programs, the truth is that we have to bring entrepreneurship into our school system right from the very early stage, and take it from Pre-K to kindergarten to grammar to, you know, junior high and high school, and inter--and we are also going to step an entrepreneurship at Downstate with our medical students. And working with Brooklyn Law School to set up a joint entrepreneurship program where you bring these two different disciplines together and help them build the company. And so, education--if you want everyone

in the pipeline, education is the way to definitely go.

MARIA GOTSCH: City College is doing some very interesting things in terms of workforce development for a little bit more of a near-terms solution. So they--they are very cognizant of kind of the growth of the biotech industry in New York City. So they started some training programs geared towards college students that are helping them understand what is it like to work in a biotech company, what are the skills that you need, giving them those skills. So now we need both the companies to be formed in New York so they can hire those students.

CHAIRPERSON FERRERAS-COPELAND: Okay.

MARIA GOTSCH: But they have a very good model to look at then you could consider replicating it at a Hunter College or Queens College or College of Staten Island.

CHAIRPERSON FERRERAS-COPELAND: Great. So we've been joined to my right by Minority Leader Matteo and to my left Majority Leader Van Bramer. Very appropriate I've got to say, and that's yes we

had a whole cheering session. And we will now hear form Council Member Garodnick.

COUNCIL MEMBER GARODNICK: Thank you, Madam Chair. Just a few questions from me. As I understand from--from your testimony, the biggest impediments to the growth of the industry is step-up space. Is that--is that the biggest or am I mischaracterizing sort of the impression we should be left with?

DR. EVA CRAMER: Well, I mean at the office an enormous amount of step up, but what we need is help in building out that space so that when companies move in there, we can help them do the tenant fittings.

COUNCIL MEMBER GARODNICK: So workable step-up space is what you're saying--

DR. EVA CRAMER: [interposing] Right.

COUNCIL MEMBER GARODNICK: --so it exists in raw form Biobat--

DR. EVA CRAMER: [interposing] Right.

COUNCIL MEMBER GARODNICK: --but it's not useful or available at this time?

DR. EVA CRAMER: Well, right we have 85,000 square feet that is available for people to

move in, but when they actually move in they customize it to their needs. So that costs us additional funds to do that, which is very expensive.

COUNCIL MEMBER GARODNICK: Well, if your strategically planning for the City of New York, how much step-up space do you think that we need in looking over the next five-year time horizon or whatever time horizon is the appropriate measure here.

DR. EVA CRAMER: We--we have an enormous amount of potential space. What we need are extra funds to build them out so that the companies can just move in immediately.

MARIA GOTSCH: And I think you need a diversity of locations as well. So, you--you want to not put all your eggs in one--just as you've got your incubator space in New York and in--sorry, in Manhattan and in Brooklyn and Long Island City that sort of come to the--with the technical development. That's been on everybody's list of a logical place to put some of these--some of these activities. So I think it's a--a--you want to have a diversity of locations. So, the--there is incubator space, and I think as we fuel more companies growing here, you'll

need some more incubator space as well. So it's--because our industry is still pretty young, this is not going to be--the answer to the question is not going to be forever. This is the problem. This is sort of the problem right now, but I think it's one you'll want to revisit every couple of years because as the industry evolves, you'll need new things.

COUNCIL MEMBER GARODNICK: How important is the connectivity to other similar companies or hospitals for these companies to be able to, you know, share ideas be in sort of a similar environment? How important is that?

MARIA GOTSCH: It's critical and it's critical in a couple of different ways. You know, the science typically develops at the university and then somebody spins it onto a company. But for the first couple of years, that back and forth is very important. And I think that's why New York City makes so much sense for these companies to stay. Because you want to be near that original lab. There's a lot of sharing that happens, and then the pharmaceutical industry in New York has been successful to tracking some big pharmas to come to New York City. Roche moved 200 jobs here. They also want to be in the mix

in talking with the early stage companies. So, connectivity of all the pieces, the university to the early stage to the late stage to pharma. All of that is important.

COUNCIL MEMBER GARODNICK: That's one of our natural advantages, too, I suppose.

MARIA GOTSCH: [interposing] Exactly.

COUNCIL MEMBER GARODNICK: I'm sorry. Go ahead.

MARIA GOTSCH: So that--so if you look at the front at the bottom saying forming in the East River Technology Corridor. So the idea that, you know, there is a water taxi that goes from the dock at Biobat that can go up to Alexandria to go to the Cornell Tech campus, and everyone will be able to commute with each other and get around through water. And I think that is tremendously helpful.

COUNCIL MEMBER GARODNICK: And it's also worth I suppose flagging in this conversation the opportunities that could exist at the Brookdale site, First Avenue, a place, which is right next to the VA, Bellevue, NYU, and the future of that site is, you know, unknown at this moment in time. You know with a variety of different priorities, but I certainly

think that biotech should probably be the leading priority of the city for that site. You don't need to respond to that unless you want to. (laughter) To--to follow up on--on the Chair's questions about evaluating success, just give us your sense because, you know, this is not an easy question, of course. But we want to make sure that we have struck the right balance here. Is, you know, is the credit sufficient? Is it too much? How do we know? You know, your testimony was we need it. It's very helpful, et cetera. We get that, but how do we know we've struck the right--the right point here for this moment in time for the next three years for this industry?

MARIA GOTSCH: So you don't want to be their only source of money, right. You want to be complementing what they've raised from other people, and so you assume--and because it's a credit against other expenses, you know, they had to raise the money from some place. The fact that it's refundable and providing cash is really important, and $250,000 for an early stage company can actually buy them probably six to nine months of run way in terms of operations. And that along side of money they've raised from

private investors should--will help them get to that important scientific milestone. So--so the amount is--and then if you sort of paired up with the State tax credit you actually are given a nice--that's a good amount of money for that early stage company. For a middle state company it becomes less important, and so I think the decision to have a cut off of the number of years that you've provided and the maximum number of revenue makes a lot of sense. But--and I think it's, you know, so I think it's--the amount per credit makes sense. For the aggregate amount I think you revisit. I think that's worth revisiting. So, you didn't have the full take up. So I think that's say $3 million is enough for now, but next year if you get, you know, an over subscription you might want to go back and revisit to see if the amount needs to be raised in aggregate.

DR. EVA CRAMER: You know, I think part of the reasons you--it all didn't get used is that companies didn't know about it. So, you know--you know, in our recruiting now we emphasize it, and I think making it more prominent where people are aware of it I think it will get used up much faster.

COUNCIL MEMBER GARODNICK: How do we do that exactly, and this is going to be my last question. It--you would think that that would be part of the due diligence of any company thinking about New York, thinking about starting up what potential opportunities, advantages that they might have. Why is that not really in the mix for them at this point, and what should we as a city be doing to better inform people about what's sitting out there waiting for their, you know, ability to take advantage?

MARIA GOTSCH: I would suggest outreach to the--the investor community. As I mentioned there are five new funds that are focused on doing early stage companies--biotech companies in New York, investing in them. So you could do a targeted outreach to those, and we'd be happy to help you with that. I think certainly where the real estate is, that's a--those are gatherings of companies. So there are, you know, the three or four that house early stage companies to make sure that the people running those facilities, and Eva has done a very good job of getting the word out. But to make sure that those people have the information, and that it

is made easy for the companies to--to access. As to why they haven't taken it up, there--you know, these companies are typically very thinly staffed. They're running--working 24/7 and so, you know, it's one more thing to access. It's probably not lack of interest. It's just that they've got a time and capacity issue.

COUNCIL MEMBER GARODNICK: Okay. Well, thank you very much and than--Don't go anywhere. This is just my last question. I don't know if anybody has questions. (laughter) Thank you for--for that. I appreciate your testimony.

CHAIRPERSON FERRERAS-COPELAND: We've been joined by Council Members Levine and Cumbo. Does anybody have any questions? No. Thank you so very much for your testimony today, and we're going to call up our next panel.

FEMALE SPEAKER: The next panel will be Kate Rochlin and James Moore. [pause] And also Chris Marshall and I apologize for the mispronunciation. Piraye Beim.

[pause]

CHAIRPERSON FERRERAS-COPELAND: [off mic] Whenever you're ready, you can start.

DR. PIRAYE BEIM: Can you guys hear me?

CHAIRPERSON FERRERAS-COPELAND: Yes.

(background comments)

DR. PIRAYE BEIM: Can you hear me now?

CHAIRPERSON FERRERAS-COPELAND: Yes.

DR. PIRAYE BEIM: Yeah, okay great. So my name is Dr. Piraye Beim. I am the Founder and CEO and also the Chief Scientist at Celmatix. Celmatix is a personalized medicine company focused on fertility and women's health. Our products leverage big data and genomics to help couples who are struggling to conceive a child, understand what their personal clinical metrics and DNA signatures say about their fertility potential. In the coming years, we'll bring the same personalized medicine paradigms up stream to women earlier in their lives so that they can proactively manage their fertility from a young age. Most women currently make life defining decisions about career and family based on their age. Our products will empower them to make these decisions based on their personal biology. Celmatix is proud to be a leader not only in the field of reproductive medicine, but also in biotechnology here in New York. I'm asked by journalists all the time how did you build a

successful biotech company despite being in New York City? And in the early days of Celmatix in 2009 and 2010 people asked why I would try to build a biotech company in New York City when at the time there were many more government incentive programs across the river in New Jersey, or a few hours away in Long Island or Pennsylvania. The answer I gave them and I give them now is that Celmatix would and has thrived because of New York City not despite being in New York City. New York is home to some of the world's top medical and academic institutions, which is what originally attracted me here as Ph.D. student while at Cornell Medical College. Something that you'll hear as the recurring theme here on the panel. As a biotech company in New York City, we're--we've been able to attract talent from these and other amazing institutions inside and around New York including from Cold Spring Harbor labs out in Long Island, and Rutgers and Princeton in New Jersey. Being in Manhattan in that way is wonderful because in a 100 square mile radius we really have some of the world's most amazing institutions. Celmatix has provided a home for talented scientists to stay and continue to flourish in their careers here in New York instead of

having to go more traditional biotech hubs like Boston, San Diego or San Francisco. The realities of New York City have also challenged us to rethink the biotech model. Plastic biotech models are capital intensive, high risk and sometimes take decades to produce a product much less a profit. Celmatix has been trailblazing what we call biotech 2.0, a leaner approach to building and scaling a biotech company or we leverage shared resources such as co-working and incubator spaces, Cloud computing and outsource capital intensive aspects of our work such as tissue cryobanking and DNA sequencing as much as we can. Now, that we've reached the stage of rapid growth and are bringing a laboratory test to market, we have to take over our own dedicated office space. Maria had mentioned this--we're now headquartered on Wall Street--and build out our own lab space, and we've opened a clinical laboratory in Brooklyn, and I'll talk about that in a moment. But the challenges of inventing--but the challenges of inventing a leaner approach to biotech have also allowed us to build a stronger more resilient company. With that said, there's only so lean even a biotech 2.0 company can be. I'm here today to share with you our gratitude to

New York City for the biotech tax credit--and it's nice to actually get to meet the people who are responsible for it. Thank you.--which provided us with important liquidity in the early days of our company that we were able to reinvest back into the city in the form of jobs growth. Without this and other similar incentive programs that made it possible for us to make New York City our home, it is much less likely that Celmatix would have been able to succeed. In the difficult early years of the company when I as the founder had no income and no permanent home, I was encouraged by the New York City Biosciences Initiative. To me, it was proof that New York City was committed to creating a sustainable biotechnology ecosystem here. Tax incentives and incentives like this can help tip the balance for early stage companies that are struggling to gain traction. It certainly did for Celmatix. When I founded the company in the fledgling biotech ecosystem that we have in New York today did not yet exist in 2009, and I had to go outside of the city to find investors and training programs designed to help scientists who were making the transition from academia to business as I was. Today, as the local

ecosystem has grown, and thanks to the economic development programs that are now in place, early stage biotechnology companies no longer need to leave New York to raise seed capital or learn the tools that they need to launch a company.

In the early days of Celmatix nearby states such as Jersey and Pennsylvania along with other New York municipalities located in Westchester and Long Island were often different incentive programs for us to leave the city. It was tempting to consider those opportunities, but one of the things that made a meaningful impact when we were just in the seed funding days were the dollars we recruited from the Biotech--Biotech Tax Credit. And I should mention that in the subsequent years we raised $20 million of private funding. Today, Celmatix has been the steady creator of high value jobs. Our average salary at Celmatix is $115,000 a year. Since our humble beginnings in a living room in Tribeca in 2009, we now employ over 40 full-time employees in New York City. We are currently leasing 10,000 square feet of office space on Wall Street, and took over lab space in Brooklyn where we were opening a state-of-the-art next gen sequencing

facility and clinical laboratory at SUNY Downstate. You heard about that, and I'm happy to answer any questions about how absolutely critical that has been. Just side bar, it was the only option for us. So I'm actually very happy to talk about that. When James Leslie, our CFO and our CO spent, you know, an intensive probably month and a half of his life researching how could we stay in New York and build a clinical laboratory in New York, he came back to me and he said, there's one option. I hope this one is workable, and it really was, the Biotechnology Incubator and I can talk about why that was really the only option for us, and right now Biobat is the only option. But I do think that diversifying the location is actually really important because in our case because we've grown in Manhattan and our workforce commutes from all over and has moved into neighborhoods that make it easy for them to come to work. If we move as far out as Biobat, it's not that we can't do it, it's just that we would literally lose headcount in doing that. And so, it was just the culture and momentum of the company. So we actually do need--I do agree with Maria that we need more diversity with spaces like Biobat, and I also

agree that if we do move out to Biobat, it will be substantially--a substantial resource investment to build out that space. We've built out a raw space already at SUNY Downstate. So we had to--we got an empty room with a VWR catalog in the middle of it, and it now has benches and it's about to have sequencing machines. We had to pay and create an incentive for a company to provide a fiber connection because we needed really high speed Internet for all of the genomic sequencers that were going to passing to the Cloud and back. So, we're having to as a company with those VC dollars meet those investments to build out what's otherwise a raw space. So I think once we scale that will--even if we have the advantage to go to Biobat, that will--those--that burden will scale as well.

So this year alone Celmatix employees will remit over $75,000 in New York City income taxes and over $150,000 in New York State income taxes. The Biotech Tax Credit is just one important part of this important environment, which has helped to make it--helped make it possible for companies like Celmatix to call New York City home. We are encouraged by the emergence of the Biotech Ecosystem

here in New York and are proud to have been part of this important growth story. Thank you for your time.

DR. KATE ROCHLIN: Hi. My name is Dr. Kate Rochlin, and I'm a co-founder and the Chief Scientific Officer of the Immunovent, a New York based early stage bio-venter that's focused on developing and commercializing cutting edge allergy diagnostic tools. And I'm going to give you perhaps a slightly more early stage perspective on it, as I think we're probably one of the youngest companies here. Immunovent has benefitted greatly from the Biotech Tax Credit, and I'm here to lend my strong support for the continuation of this program through the continued supporting of early stage companies and to promote entrepreneurial life science ventures. Immunovent was founded in 2013 based on technology that was developed a Weill Cornell University. The technology was originally patented by Weill Cornell, and licensed exclusively to Immunovent. And the company is now developing next generation needle-free allergy diagnostics specifically the Landiex (sic) platform. Traditionally, allergy diagnostics are done by either skin prick testing, which is

uncomfortable and time consuming, or blood testing, which often suffers from inaccuracies, false positives and false negatives. What we've developed is a test that takes a soft brush, and we just take cells from the inside of your cheek, and we can actually process those cells, isolate the proteins your body makes when you're allergic and diagnose up to 50 allergens from a single brush. We've shown that our technology is actually more clinical accurate, and we're able to diagnose many allergic patients who are negative by traditional blood and skin testing. And that rate of negative result when people have allergic symptoms is almost 25%, and the reason that this is so important is that allergies can be treated and in many cases cured with targeted immunotherapies, but in order to have access to any of those treatments you have to know specifically what you're allergic to. So diagnosis really becomes a crucial issue.

As the Founder and Chief Scientific Officer of Immunovent, I've seen first hand the challenges facing early stage companies in New York City such as finding affordable office and lab space, which I think seems like a common theme here, as well

as the high cost of doing business in New York City. As a consequence, Immunovent like so many other early stage companies, considered options outside the city for basing our offices. Our founders, however, were committed to New York City where we work, live and raise our families. In the advent of programs such as the Biotech Tax Credit or Biotech Tax Credit has made it feasible to remain in New York City and successfully run our company. This year the tax credit allowed Immunovent to receive a substantial amount, which we were able to put back into the company stretching our investors' money further, and allowing us to move our plans forward even more rapidly. Specifically, Immunovent used the majority of our tax credit to hire and train new employees to oversee medical affairs. The responsibilities included physician outreach to create partnerships for our larger scale clinical trials, as well as patient outreach within the allergy community to develop a more comprehensive understanding of the patient's experience with allergy testing. And finally, assistance in grant writing for non-dilutive grant sources such as SBIR.

The Biotech Tax Credit has, therefore, both advanced the company's goals and help create jobs in New York City. I know form first hand experience that Immunovent is not the only--is only one of many biotech startups that have benefitted greatly from this program. I also work as a senior scientific advisor to Allevate (sic), which is an allergy therapeutic company, which also receives a tax credit. Allevate was able to put their credit towards completion of a year-long clinical study at Weill Cornell University, as well as additional studies in animal models for their novel therapeutics. The data from these studies will be instrumental in getting their product to market, and really critical in providing data to physicians who are interested in using their products. I firmly believe that the availability of the Biotech Tax Credit provides a strong incentive for companies to remain in New York City rather than to relocate to less expensive areas outside the city.

Over my years in the biotech industry in New York I've seen how the tax credit in conjunction with a number of other NYC initiatives including the Harlem Biospace, the Entrepreneurship Lab and the

SBIR Impact program have been instrumental in forging a strong community of early stage biotech and life science ventures in the city. The tax credit has been essential in helping to transform New York City into one of the fastest growing cities for biotech and creating an environment conducive to early stage life science companies. It's my sincere hope that this program will be extended so that we can continue to grow NYC biotech at it's earliest stages, and then retain these companies in New York City creating more exciting motivations in technology, jobs in the industry and making New York City truly the hub of biotech and bioscience. Some of the best science in the country is being done at research institutes in New York City, and a record number of companies have been spun out of these institutes in recent years. The best way to incentivize these companies is to remain in New York. It's through programs such as the tax credit, and the city's continued commitment to building of an entrepreneurial environment in the biotech arena.

In closing, I want to thank the committee for their attention to my testimony regarding this very important issue. And I truly believe that the

continuation of a tax credit will be extremely beneficial in the continued development and maintenance of the vibrant early stage life science community that we strive so hard to create in New York City. Thank you.

[pause]

JAMES MOORE: Okay. My name is James Moore (sic). I'm (coughs) a Founder and President and CEO of Biogenetics (sic) a company that (coughs) was founded in 2008 to target Alzheimer's Disease going after a target, which is the target that the rest of the industry didn't care about and wasn't focused on. Over the course of these eight years, of course, we've faced numerous challenges including the economic downturn, which occurred about a year after we got started. And the restructuring of the pharmaceutical industry, the failure of all of the drugs in Alzheimer's clinical trials for the other targets that we weren't focused on. And the subsequent long period of time it's taken the industry to retool to move to our target. So my--my--I'm glad--I just returned from the Neuroscience Conference in Chicago last night. I'm happy to report that our target is probably the preeminent

target for Alzheimer's Disease. We believe that our long (coughs) and part of the reason why we got through this longer extension of time was because of programs like the New York City Biotech Tax Credit. Now, during our eight years of operational history, we have raised $5 million of equity investment. We've won $4 million worth of grants. We have $2 million worth of applications of grants pending, and we're (coughs) currently working on a $5 million raise focused on strategic money to come into the company. And (coughs) we--we've been very successful at writing grants and we were both training--on the training side of helping people to write grants, and also on the recipient side of being in the SBIR impact training, which we greatly appreciated. We mead a decision not to become a grant writing company, but to really become an operationally and commercially successful operational company. And our goal is to become a cash positive company. When we become a cash positive company, we're going to go off into the future forever as long as we remain cash positive, and that's what we're determined to do. But importantly, we're also determined to put forth most important drugs for Alzheimer's Disease

targeting teraligamos (sic) which we've been focused on for more than 12 years, four years before we founded the company in New York City. (coughs) The Biotech Tax Credit has a lot of benefits for the City of New York including (coughs) and should be renewed including that it helps to create new jobs and increase tax revenue thereby. It also enhances--and let me tell you that when we create jobs we don't create jobs just to have them for three or four months. We create jobs to keep those jobs going off into the future at all levels of educational workforce (coughs) for the city. (coughs) But it also takes advantage of the highly educated workforce that we do have in the city. And the Biotech credit helps to promote growth in new industries for the city that will eventually create possibly the next Pfizer, which began as a two-company operation in this city and grew, as you know, to be the number one biotech-pharmaceutical company in the world. So that's the potential of these companies that are sitting here. Even these four companies at this table could be the next Pfizer that could crate 70,000 jobs in the city. (coughs) They benefit companies like Allegameraspite (sic). As many people

pointed out, providing more runway, which helps to stimulate investment into the company because investors get a longer time to achieve the milestones that Maria Gotsch was talking about. And so, all in all (coughs) I think it's a program that has a lot of merit, and I don't have any specific recommendations for making any changes to. We benefitted from it. We greatly appreciate the support that we got. We're working in an important area. By the way, Alzheimer's is the most costly disease, $220 billion of costs to the healthcare system per year projected to go to over a trillion dollars by 2050. It's going to potentially bankrupt the healthcare system. So there's also long-term benefits that come out of these companies that are solving various healthcare related issues in terms of future costs savings. And the City is certainly bearing a lot of that cost of assisted living, and paying for people who can no longer take care of themselves. So, we appreciate greatly this help and support that we've had. It's been instrumental. I--I always think in terms of, you know, how do we extend our runway, and this certainly has been pivotal to our company, and probably even one could say well, you raised $5

million, what does that smaller amount of money mean? Well, that smaller amount of money means that I'm sitting here with an operational company today because there are plenty of times where we could have run out of money, and this helped to prevent that. We've never run out of money, and that's one of the things that I'm proud--most proud of. We've hired numerous people. Right now we're eight employees, and we would like to expand. We would probably expand to like three times our size if we're successful at bringing in this financing realm. I also agree with everyone that--the--the thing that--what--what you were mentioning, the same thing that you need to have space where you are because if you are moving all around, eventually you're losing your employees. So that having multiple locations is key, but I think having such a large facility like the Biobat for manufacturing jobs-- Why can't we manufacture in this country? Whoever told us that can't manufacture, we are a manufacturing company--country and that facility is where a lot of companies can do their manufacturing even if they've done their technical development at places at the Audubon (sic) like we have. Manufacturing can be done in Biobat.

So I'm looking forward to moving our company to the point where we're actually manufacturing and I'd like to do it in New York City, and these types of programs will help to enable it. I'd be happy to help the Council in the decision. If there is any other information they need from us regarding the specific points I brought up in my testimony and in my written testimony, which covers some additional points. Thank you.

CHAIRPERSON FERRERAS-COPELAND: [off mic] Thank you.

CHRIS MARSHALL: Hi, my name is Chris Marshall. I'm the Founder and CEO of Avatar Biotechnologies and Avatar Medical. We do business as Avatar Biotechnologies. We operate out of the Brooklyn Army Terminal as BAT where we're a sublet from the international AIDS Vaccine Initiative, and we are commercializing a technology that helps stabilize vaccine immunogens in the most protective and effective confirmation, and thereby enhances their performances. (coughs) We--we got started with a Gates Foundation grant where we basically started working with the International AIDS Vaccine Initiative to--to design an HIV vaccine, and then

leverage the funding that we had from the Gates Foundation into SBIR funding. And so we're not at a stage where we have raised about $6 million in grant funding, and we've used the tax credits to--to bridge from one stage to another, and also to fill in the gaps that grants will not fund. So right now we're--we're focused on a universal flu vaccine. We're working on an RSV (sic) vaccine, and we're working on an HIV vaccine, and we're--so the RSV vaccine is a pediatric indication with potential for about $2 billion in annual sales. A universal flu vaccine will generate probably about the same, and an HIV vaccine is very difficult to say what that would o in terms of--how that would do in terms of sales. So it depends on manufacturers including how much protection it would provide. But I think everybody could agree an HIV vaccine would be a useful thing to have. So, we've basically been using these--these funds that we get from the city and from the state, and we also got the QTDP in 2010 from the--from the IRS. We've been using these funds to fill in where grant funding will not--it's, you know, there are certain things that we cannot pay for with grants, and one of those things for instance is patents. So,

I'm--I'm a patent agent, and so we--I--I spend a lot of time focusing on broadening our patent portfolio and making sure that whatever--whatever paths we're taking in terms of how we're going to apply the technology, that--that, you know, if that path works out then so we've got our--we've got our parents in places, and we can partner securely with--with Pharma.(sic) But if something doesn't work out exactly the way we've planned it, we need to make sure that our parents portfolio is strong enough so that we can go back and redevise it and still be in a position to partner. And so, with the--with the funds that we receive from the city, we've been able to file a very broad patent portfolio, and we now have a bunch of issued patents and patents pending. So, I think that's--that's really the main thing that we've been able to get out of this from the city. So today we're shipping the--our first RSV vaccine to NIH to get--to get it tested on animals. And we hope to--to get the results, and if we do that, we hope that--We've been in touch with many of the pharmaceutical companies, the major pharmaceutical companies in the world. Several have expressed a lot

of interest, and we hope to be able to bring that forward. That's my testimony.

CHAIRPERSON FERRERAS-COPELAND: Thank you very much for your testimony, and it's just very exciting to see all the things that are happening here in New York and with 8.4 million people, your businesses will touch each one of our lives in very different ways especially for, you know, young professional women balancing, you know, when--what direction we want our career to go in, and you're right and when do we have kids, and you have them. And can we have them at 40 and is it still okay, and all those decisions that are made.

COUNCIL MEMBER CUMBO: [off mic] What did they say?

CHAIRPERSON FERRERAS-COPELAND: Well, they're (laughter) figuring it out. That's what she's doing. She's figuring it out for us and we're really excited, and hopefully our allergies can be resolved, too, while we're at it. So I just wanted to acknowledge that we've been joined by Council Members Johnson, Gibson, and Rosenthal. Again, you really are the leaders, and very much part of our future. So we wish you much success. If you could

just tell me like the three things that you knew that you needed as a start up whether it was the support of other businesses like you, or what are those three first things that are start up that might be watching this hearing. Someone that like has a great idea and wonderful intentions, but you knew that you needed those three things to succeed, what would they be?'

DR. PIRAYE BEIM: Well, I think it's pretty straightforward, I needed--I needed money. I needed space, and I needed training. I was an academic scientist. I did my PhD here, and thought that the best way to solve the problem that I wanted to solve was through a commercial venture, and a start up. So I was able to benefit from a training program that they had out in Long Island. Now, we have a number of programs like that here in Manhattan and I've mentored in some of those programs, and it is so critical because in a PhD program as a scientist you get trained in some of the skills of entrepreneurship that you need. But one of the anecdotes that I remember was when I wrote to somebody I said somebody told me I need and P&L, which is, you know, you guys on the Finance Committee, a profit and loss statement. And I wrote

in the email P-N as in Nancy, L and somebody wrote back and said, Do you mean you need and P&L? And imagine that that's where I was trying to raise funds, and when we got started to worked for a long time out of our homes. But eventually when you start to bring employees on board, you need to put them somewhere. When you need a laboratory, etc. you have to scale. So I think those three things are really the founding and worked for us.

DR. KATE ROCHLIN: I just wanted to say that I agree with Piraye on all of those points. The other one that I'd say that was incredibly important for me was mentorship, and finding somebody who's gone through it before that can really stick with you and help guide you and be a sounding board as you go through the ups and downs of a start up because there are great days and there are really tough days. And, you know, it's great to share your triumphs as well as well as your struggles with somebody. And there are a number of programs that New York City has set up. Our company went through the Entrepreneurship Lab. We were actually one of the first class in the Elab, and I was actually was paired with mentors through that program, which is another NYC EDC

Initiative that I'm still with today that I still work with today. So funding was huge for us and space. We actually were are member--are a member of the Harlem Bio-space and mentorship was really critical.

JAMES MOORE: I'd say funding, space and what I would want to add to that, and that's what New York also really provides us is a lot of perspective. So one of the things that we struggle with a lot is not knowing what the rest of the world thinks. When we're developing and we're sitting in our lab and doing like what we're doing, but we need to talk to a lot of other people and really understand what the rest of the world thinks of what we're doing or would think if they knew about it. And so being able to get around and being--so being able to build a company in New York City actually really provides for a lot of that, but it's expensive. And so that brings us back to finance. (laughs)

CHAIRPERSON FERRERAS-COPELAND: Got it. I got the funds part. (laughs) Council Member--Oh, I'm sorry, go ahead.

CHRIS MARSHALL: Well, I agree with everyone in terms of what they were saying. I think

also it's key to have--you know, being located in the city brings us a great workforce that enables you to grow and expand. And I think also a lot can be said for location that being in an accessible location. I remember I did a start up--well, I worked at a company B.M. Rigger (sic) in Rockland, Massachusetts, and we did have--we had a--it was a great company. I learned a lot, but we didn't have a lot of people coming by. And then we did a start up when I was in Boston right in the center of Boston, and what a difference in terms of the number of people that we were able to just come by and hear us--our story. The same has been true in New York City that we're so accessible, so easy for people to get to us. I think that's a vital ingredient, and I think having the space all over the city helps to enable that. And companies grow and need various types of space as they grow, and some companies are virtual initially, and only need office space, and can be incubated just with that virtual company in that office space. And then some companies have laboratory space like we do, and then manufacturing space. So I think, you know, the city having that kind of oversight coupled with these kinds of programs to provide space. Because

there are certainly a lot of space where these types of incubators and growing areas for companies can be implemented. And so I applaud putting these incubators into Harlem. I think t hat's a great opportunity for the residents who live there to find jobs, and it brings a lot of money into those neighborhood and also in Brooklyn. And to take over infrastructure that maybe was underutilized or not utilized at all to apply it. So, those are the ingredients, and also I might add good accounting support for a young company like you mentioned to guide them because in the end that's what it's all about, can you get the cash flow positive. And I think that's--that's--you have to build a best practices business to do that so--

CHAIRPERSON FERRERAS-COPELAND: All right, thank you very much. Council Member Cumbo.

COUNCIL MEMBER CUMBO: Thank you so much, Chair Ferreras-Copeland, and I wanted to congratulate you all on all the work that you're doing here today. I'm also the Chair of the Women's Issue Committee. So it's really dynamic to see women at the table in this particular industry. Wanted to ask you briefly if you all could just talk about the amount of jobs

that you've created in your company, and approximately how many people are in each firm, and what are the salary ranges for those particular positions?

DR. PIRAYE BEIM: So one thing I'll especially because the topic of diversity came up is as female founder I get asked all the time about the barriers and the difficulties, and I actually had one journalist interview last week where they said I want to hear about the unique challenges of being a female founder of a biotech company in New York City (laughs) I said okay, you don't see many people to talk to then, but let's talk about that. And what I would say is that for us, and what I said to the journalist is that I think that there are serious barriers to entry in a lot of the difficulties. Celmatix's story had been one of diversity. We have women from--You know, I'm the CEO of the company--from the highest paying jobs of the company, which is not mine to the lowest paying jobs of the company, women across the board, every single department of the company including programmers are the company are female women of color we have at the company. So, we've been very, very lucky to have such a diverse

team. I think it's part of what again when I talk about the--we succeeded because of New York City not despite New York City. I think being able to have that diversity here has been one of the things that has been so amazing for New York. We have--we made six job offers in the last couple of weeks, so I've probably run out of--it will be 45 now? Yeah, so we've got 45 people now, and I think the lowest salary of the company is $72--(laughs) So the lowest is $72 and the highest is well into the--(background comments, laughter) Yeah, no, I'm kidding. It's actually not that. The highest is a market rate for an executive in biotech, which is well into the six figures. We have had to pay--so I think some of it--there as a statistic earlier that the average job or the average salary for a company like ours is around $80,000. That's not the case for Celmatix. The average is $115,000. One of the reasons is that Celmatix, part of being biotech 2.0 a new trend in healthcare, and New York City is really I think at the forefront of this is the hybrid biotech tech company. So we hire a lot of programmers, and we compete for data scientists because we do big dat. We're competing with Citi Bank and Google and large

companies that can offer huge bonuses, and incentive packages and 401(k) matches and things like that. So, for Celmatix where we really are no the edge of information technology as well as the laboratory science, the job market is--it's very competitive. And so we have to pay competitive salaries to be able to get and keep those jobs. And now, that we're out in Brooklyn, the tax credits and being out in Brooklyn have been hugely helpful to us because we able to actually on a--on an actual-- The amount of dollars we spend pay submarket (sic) because they get the tax relief, and they don't have to pay the employee taxes and we don't owe the employment taxes on those people for New York and state, and that's been really, really critical for us.

COUNCIL MEMBER CUMBO: Thank you.

DR. PIRAYE BEIM: Yeah.

COUNCIL MEMBER CUMBO: Thank you.

DR. KATE ROCHLIN: Hi, I have to say it's really exciting to be up here with a fellow woman founder, and who really actually led the way for me. Piraye was several years ahead of me in the same graduate program. So, a role model kind of all the way.

COUNCIL MEMBER CUMBO: But it is--it is a challenge. I've been mistaken for my own assistant several times, which is always a little bit of a shock when people ask when Dr. Rochlin is arriving and they ask me. But I'd say overall the environment here has been incredibly supportive. It's bean really amazing that you go to all of these networking events. You meet great people. I feel like they've really welcomed you into the community. So it can feel like an initial barrier, but I feel like the life sciences community here is really that, it's a community. And so you run into the same people all the time. You really get to know these people. They get to know your company and they follow where you are. So, I'd say that while initially it can be very daunting, I think once you're in it, New York has done a lot to foster this community atmosphere, which is fantastic. And I think that's something that's very new to New York biotech. For us, we're a much smaller company so we just hired our most recent employees and that put us at five. And that's been really exciting for us to grow. We're stepping into our larger clinical trials. I think we're going to grow more. Our average salary since we're much

smaller and we're kind of trying to run on a lower cash flow between $70 and $90--

COUNCIL MEMBER CUMBO: [interposing] Uh-huh.

DR. KATE ROCHLIN: --depending on the role, but we like to think that we're right there that we offer a lot of benefits, and offer just a really great supportive working environment, and a lot of things, you know. And also we offer a chance to own a part of the company and to grow with the company as people take on larger roles. And we think that that's important to people who are invested in what they're trying to create. So that's something that's been big for us.

COUNCIL MEMBER CUMBO: Thank you. You gentlemen want to--

JAMES MOORE: Yes, Right now we have eight employees and we have--what I'm most proud of is we have an employee who we hired from the neighborhood. We're in Washington Heights, and she--she started probably at about $36,000 and we're paying her $45,000 now. Importantly she has a good benefits package including an equity package. The reason why we hired her was I thought it was

important to connect to the neighborhood where the company was, and she would be the way to do it. She came along, you know, answering a job ad, but it was I thought a great opportunity for us. And also, we trained her to do a lot of our purification, work that similar scientists really would not--we would tend to get bored doing. And it's been really good for her because she's received a lot of training and really elevated her own professional career, and has contributed very consistently in that position that we hired her in. Now, as I mentioned, we have equity that we use, and we try to keep salaries very low. Let me tell you that's how you maintain. So as much as I make a package that includes equity, the better. So I'm proud to say that we have as retain counsel Paul Ginsberg who was the head of Pfizer's Patent Office. They were only paying him with equity, for instance, and that's what he preferred, but we believe equity to be worth quite a lot because a pretty successful company like us could be worth in excess of a billion dollars. In fact, iPierian, which was sold to Bristol-Myers, which was a California company with one antibody was sold for $155 million cash. We have two antibody platforms as

well as two small molecule platforms. So we're probably worth much more than them as long as we can reach those important milestones that can--

COUNCIL MEMBER CUMBO: One City Safe and Fair Everywhere How many--how many people would you say are part of the firm now?

JAMES MOORE: Eight.

COUNCIL MEMBER CUMBO: Eight?

JAMES MOORE: Well, directly eight on salary--

COUNCIL MEMBER CUMBO: Okay, and the other?

JAMES MOORE: --and part-time salary. We have another four or five who are not on salary, but just getting equity from the company.

COUNCIL MEMBER CUMBO: Thank you.

CHRIS MARSHALL: We're a little top heavy so we're five PhDs. (coughs) and two technicians. If I remember correctly, I think--I think everybody at the PhD level is between 70 and 100 and the technicians are just shy of 50. One of them is 44 and one is 46 I think.

COUNCIL MEMBER CUMBO: And one of the things I think is great about this is that it's an

industry that is growing in the city that's certainly going to continue to be able to grow and develop and create jobs, which I think is phenomenal. Today in the--at 1 o'clock there will be a hearing today on MWBE participation, and it's going to talk about in many ways how firms that either have contracts with the city or receive tax incentives and benefits and that sort of thing to be able to report what their MWBE requirements are and who's on their board, who's on their staff, and who their employees are. So the question is also because I hear a lot and I represent Brooklyn, Fort Greene, Clinton Hill, Prospect Heights, Crown Heights and Bed-Stuy, and I also hear a lot about Harlem. So in terms of where you're relocating and that sort of thing, my concern is that as these businesses continue to grow, are you reaching out in a very real and tangible way to connecting with the African-American and Latino communities, particularly where you're doing business in terms of CUNY institutions such as in my district at Medgar Evers College. Also, we have several high schools in the area such as Benjamin Banneker, Brooklyn Tech. Are there any ways that you are recruiting to make sure that this is an industry that

is diverse? Because a lot of the testimony that I ready said that you're recruiting from other stats. So when other states come into communities like Harlem and Brooklyn, you know, when we--when we in our--in our world when we see those advertisement for who's paying $2,500 and $3,000 for an apartment, in our mind we can't even compute who is able to pay that. But there are a lot of industries that people aren't aware of that are growing in our community. And if we continue not to educate and connect the existing community to these industries, they will be pushed out for a workforce that can come into the community, gain those jobs, and be able to pay a higher premium for rent and those sorts of things.

DR. PIRAYE BEIM: So one thing I was really proud of and I take no credit for this other than just putting together the right group of people, but the women and including one woman of color who are programmers and data scientists at our company, she hosted an event for young women, and invited them into the company. And I walked in one day, and there were just all these young women of color in the office, and I said, Oh, you know, what's going on and they just organically invited them in, showed them

under the hood of what they were doing. We have an active internship program. We've mentored a number of local high school children across different ethnicities, races and genders. And I'm proud to say that all those young people have gotten into the college they wanted to and gotten into med school if that was their dream, and been inspired not only to pursue science and technology careers, but specifically to build a biotech company in New York one day.

COUNCIL MEMBER CUMBO: Uh-huh.

DR. PIRAYE BEIM: Because that was very fun for them. So, I've been personally very committed to this when I first came to New York. One of the reasons that I came here is when I was interviewing for graduate school in Baltimore, Johns Hopkins Medical School, and I was asking about, you know, what are the outreach programs for the local community here because I see a lot of urban decay--

COUNCIL MEMBER CUMBO: [interposing] Uh-huh.

DR. PIRAYE BEIM: --as I'm driving around. Obviously, Johns Hopkins has a great medical school. But what are you doing to really enrich the

community. And I'm not saying that Johns Hopkins doesn't have programs, but just a group of people I had spoken to didn't have a good answer. And when I was at Weill Cornell, there were answers to that question. It was well, we have an AIDS awareness class that we all teach in Harlem, and you can mentor and tutor the children of the janitorial staff in science and math after school. And so, I participated in those programs and they inspired me--

COUNCIL MEMBER CUMBO: Uh-huh.

DR. KATE ROCHLIN: --and really enriched my experience in New York as well, and gave me those meaningful moments that I look back on in my graduate career. One of the challenges is a company like Celmatix we such highly technical jobs--

COUNCIL MEMBER CUMBO: [interposing] Uh-huh.

DR. PIRAYE BEIM: --that are higher income, that do require that we reach outside of New York. Sometimes we can hire for capabilities, and we've done that a number of times. So we've been able to repurpose a number of people from the publishing industry, the media industry, finance, design, the other industries that New York has

traditionally been known for. We've actually been able to bring them in because they're so excited that their design skills or programming skills or financial skills could help a mission driven organization like us to really promote women's empowerment and better insight, and better creating (sic) for couples who are struggling to conceive. And so we've been able to do that, but we do have to get to a stage where we have the diversity of roles with the company that we can start to reach out to the local community. I think being in Brooklyn is going to be great for us.

COUNCIL MEMBER CUMBO: Uh-huh.

DR. PIRAYE BEIM: You know, we're going to be--we're going to be having lunch in the neighborhood. If we--if we need to build we were talking about if--if our, we hope, if we hit it out of the ballpark and we're suddenly getting more samples than we can handle locally on site. One of the arguments we made to our investors about why SUNY would be a great place to locate our incubator is if suddenly overnight, we need to expand, there's a lot of potential warehouse space in the neighborhood. And we'd be doing that organically going out to a

neighborhood. We'd have to hire in a neighborhood, et cetera.

COUNCIL MEMBER CUMBO: Uh-huh.

DR. PIRAYE BEIM: So I look forward to hopefully in a year or year and a half telling you--giving you a much better track record of reaching out and making sure that we're also employing the people who are here, and not just kind of bringing outside people in at high wage levels. But it's process and it's an ecosystem, and I think to his point about, you know, the next Pfizer or the next Genentech maybe being here is when we grow up in these neighborhoods it is going to end up impacting. I do think that once a company gets to a certain scale it's not just all high tech jobs at that point, right. But I think helping us get to that point where we can start to employ people and reach out to the communities and do all these things is really important.

DR. KATE ROCHLIN: I wanted to add to that. We're earlier stage so I mean out of the five of us we're two women and three men. But what's actually been great is being at the Harlem Biospace. They're connected to the Harlem community, and so we have had panels of high school students come in that

we've spoken to, and through that I think what we do with our allergies is very tangible for people. It's very easy to understand, and what's been fantastic about that is I got so many of the students were interested in allergies and biotech that I've actually gone out and I speak at a number of high schools both in Harlem and actually in the Bronx now. And now we've done small group discussions to help these students who are high school level understand, you know, what are the questions you ask when you want to start a company? How do you understand the science? How does that translate into a company? What steps do you have to take to be a scientist? What steps do you have to take to work at a company? And although I've spoken at a number of schools, the one that has the deepest impact on me personally was a school that was actually four immigrant women who were non-English as their first language and often times had no access to elementary education in the countries that they came from. And so the school actually took women who are of the age from 15 all the way up until 25, and it was a high school curriculum. And so a lot of them didn't even understand, you know, initially the vocabulary for

biotech, how you would describe a company. And they were one of the most enthusiastic groups of students that I've had that emailed me afterwards that had follow-up questions. I brought a lot of them into the lab to kind of see what we do, to see what we need when we talk about doing experiments. And really, the level of excitement that you see in people that even had no elementary education. And really trying to give them the tools to get excited about this was really impactful to me. And so I think that, you know, we've had interns from some of these schools that have come in. We've worked with some of these students after school, and I think that that's been an amazing thing about being in Harlem and really close to the Bronx for all of us.

COUNCIL MEMBER CUMBO: Okay.

JAMES MOORE: (coughs) I just wanted to add a few things. I think these are great point. We--I wanted to point out that I actually got my start at Hunter College. So I wasn't a student there. That's where I got my first job, and I worked for Rifka Radner (sp?) and Peter Lipky (sp?). Peter Lipky is I think in SUNY Downstate right now. Rifka Radner is retired, but she was somebody who trained

in Chargaff's lab, and Chargaff was instrumental in the structure of DNA, but Watson (sic) encrypted it together. But when I joined there the reason why I took two years and worked at Hunter was because they were doing really cutting edge microbiology in protein biochemistry. So we've always used Hunter as a resource for employees. We've had probably five Hunter interns. We've had two Hunter employees. I just coming back from neuroscience on the plane I met two Hunter graduate students who invited me to come and give a seminar, which I'm going to do in their journal club. So this is a great resource, and I think the more you can simulate it--I understand what you're talking about. There's a lot of talent there, and, you know, you bring it into these companies, and it's a real benefit, and you don't have to go looking in California to bring great people into a company. There's lots of people right here. So because I came out of Hunter, then when I got a resume, I was like whoops, let me look at this resume a little more closely. That's my unbiaseness, but it's been really productive for us, and one of our key research associates came from Hunter, and that enabled-- You know, her work has been so pivotal to getting one of

our Sloan Medical programs going, I can't tell you. So there's a lot of talented people and, you know, that's part of what the city brings to all of us, all of these companies.

COUNCIL MEMBER CUMBO: Thank you.

JAMES MOORE: Thank you.

COUNCIL MEMBER CUMBO: This gentleman just wanted to add something, and then I just wanted to conclude.

CHRIS MARSHALL: Okay, so I just wanted to say that we're at a stage where the--when we bring somebody into the company they're sort of like bringing their own asset to the company. So we--we hire--as I said, we've very top heavy, and we hire people who--who already have been working on a particular project. That being said, so we can't really--we don't really look at anything other than what they've been working at--working on before. We have ended up bringing a bunch of people together who were primarily based in New York before. Not all of them, but most of us were based in New York. I did my PhD at Rockefeller. My partner also did his PhD at Rockefeller, and one of our flu person was at Mt. Sinai and came out of SUNY. We have another post-doc

at SUNY Downstate. So we do have a--we have a lot of people who are coming out of New York, but we can't really look at that right now at this stage of our company.

COUNCIL MEMBER CUMBO: I just wanted to thank you all for your answers, and it's very good to hear that you all are doing work in the way of diversifying the industry, particularly as it pertains to African-American and Latinos. When we look at neighborhoods like Harlem and Brooklyn, and really the city of New York, African-Americans and Latinos make up a little over half of city's population. So it's important that when we're receiving these tax benefits and that sort of thing that there--there comes a certain responsibility with it that we are supposed to be able to work towards the benefit of all New Yorkers. And so that--those different industries are reflective of that. So I just wanted to conclude that it seems like you all are doing a lot of great work. I'm gathering from your answers the Black and Latino representation within your industry and your prospective companies is not necessarily where it should be at this time. I'm hoping that you all will continue to do the work

that you're going to do. Because I know that you all have to be back here sometime in 2017 to advocate for a further extension of this tax credit. And it would be very important that when coming back the next time that we're able to report on a lot of the successes and gains of the educational and recruitment work that you've been doing. So I hope to see a lot of that moving forward.

JAMES MOORE: I should mention that we had one African-American who worked for us our first few years. We had someone from the Dominican Republic who would probably be considered African-American here. And then we've always been about half Latino. So it's a great resource and I agree 100% with what you're saying.

COUNCIL MEMBER CUMBO: Because the best companies are diverse companies--

JAMES MOORE: [interposing] Right.

COUNCIL MEMBER CUMBO: --and let us show that.

JAMES MOORE: I applaud, you know, the women, you know, directive businesses.

COUNCIL MEMBER CUMBO: [interposing] That's critical.

JAMES MOORE: That's a--that's a critical thing for us going forward and really tapping into everything, and we're proud to see that.

DR. PIRAYE BEIM: And we do have women of color including Latinos at our--at our company as well.

COUNCIL MEMBER CUMBO: Well, that's fantastic.

DR. KATE ROCHLIN: We have woman at my company that is African-American.

CHRIS MARSHALL: And we--we--I didn't mention that we have some--

COUNCIL MEMBER CUMBO: [interposing] And we're talking about, you know, we can say stuff like 40% or 50%. We're trying to get there.

DR. PIRAYE BEIM: Yeah.

COUNCIL MEMBER CUMBO: I get that we have one or two here and there. That's great in small companies. I get it, but, you know, moving forward it's--You know, I always reflect here in the City Council, you know, Dan Garodnick of Italian and Jewish heritage; Ferreras-Copeland Dominican; Daneek Miller, Puerto Rican and African-American; myself African-American; Helen Rosenthal, Jewish. Like

that's kind of the diversity that we want to get into seeing in all of our industries. And it's really only when the people vote for what they want do you get that level of diversity. So if we don't make decisions to be inclusive, we're making the decision to be exclusive. So we've got to make that a part of our goal and priority. We want to develop our companies, but we also want them to reflect the City of New York as best we can. So I applaud your work. You're doing awesome work. I look forward to hearing more about having children after 40, and I will see you at the Mets game.

DR. PIRAYE BEIM: Get out there. (sic)

COUNCIL MEMBER CUMBO: (laughs) Okay.

DR. PIRAYE BEIM: Thank you.

COUNCIL MEMBER MILLER: I'm Council Member--Okay, I'm Council Member Daneek Miller and I thank you so much for--I have no questions, but thank you so much for your testimony, and I'm sitting in for our chair Ferreras-Copeland. And I would like to call the next panel. The next panel is Jeffrey Wang.

[pause]

JEFFREY WANG: I pushed the button. With--with apologies to council members here, I

didn't fill out a slip. So I wasn't called to the preceding panel. My fault.

COUNCIL MEMBER MILLER: That's okay. You're here now so--

JEFFREY WANG: So, I provided my written testimony, but I think that rather than, you know, just give another example because I think that the four examples given are quite representative. I thought I should give my perspective on the tax program, and a little bit about myself and how we run the company to Council Member Cumbo's, you know, questions. So I'm a born and raised New York City person. I was born in Fordham Road--I was born in Manhattan, raised in Fordham Road in the Bronx. I went through public high school--public school in New York City. I've worked my entire career in New York City. So, I consider myself lucky to be successful. I also consider myself to be a representative of a subgroup of New York City people so Asians in general who have managed over time with hard work and a little bit of luck and a lot of support to break the so called bamboo ceiling. So when it comes to things like why am I here to testify about the benefits of the Biotechnology Tax Credit, I've used up three

years of credits. There's nothing--there's no advantage for me to come here and talk about something I'm not going to get a benefit for my company. But, you know, through--through Paul's work, you know, the previous council member, council person, Council Member Garodnick's leadership, we've clearly benefitted, and the examples are in the staff. You know, we--we came to New York because we were aware--New York City because we were aware of the New York City Tax Credit Program. We were solicited to go back to Florida from where the company started, but again, the package of benefits offered by New York City, New York State beat out our going back to Florida. We received tax credits in--for tax years '11, '12, '13. So they come early the following year, and I could say in the first year we received a credit. Times were tough, as people described, but we were able to keep some jobs rather than further reduce the workforce. So that's what the money primarily goes for is to pay salary and wages.

The following year 2013, we didn't have money to make payroll--to make payroll, but the credit check came, and so we were able to make

payroll. So you're talking about tangible benefits for the tax credit. When it comes, it comes in a check, it comes in the mail and just somebody opens the mail and everybody gets excited and runs to the bank to deposit it. It's very important when you think about what funds are used for, mainly salary and wages. Things turned around for us. So when we received our 2013 check in 2014, we had already consummated an important transaction with a big pharmaceutical company. What were those funds used for? It allowed us to add three technicians to our staff. They were all minorities. They were all resident in new York City already, and they all lived either in Brooklyn or Queens. We didn't have to look very hard. So to Council Member Cumbo's question, I think I'd like to add most of our workforce are minorities, resident in Brooklyn and Queens already. We didn't have to look very hard to recruit them. They could be graduates of St. John's. They could be graduates of Brooklyn Poly. We didn't have to look very hard. So if there's a myth that there are no women available, and women of color unavailable in the research world, I could say from my single perspective that's just not true. In fact, I would

say we have a hard time locating qualified white men if that's the counterpoint for those positions. These are entry level positions by and larger or a couple of years of experience. Our salary range to another person's question is--the last two people we hired one was African-American. She came in at $40,0000 as an administrative assistant having previously worked for Cable Vision in Brooklyn as customer service representative. Okay. The other person we hired into clinical operations is of Latin--Latin descent I believe and she--she lives in the Bronx. She didn't have a job after graduating from college. Somebody referred her to us, and she was hired in at $45,000. In the first year, given their performance, they'll be working--we're confident that they will perform, they receive a $5,000 salary increase six months into their tenure. So, you know, as someone who grew up New York City, who's a person of color, I absolutely believe in the closing statement of Council Member Cumbo: If you don't want it to happen, it's not going to happen. So, I would challenge all of my counterparts here to think hard about how you recruit and retain residents of New York City. If you just start there, you're going to

get by definition a rainbow of candidates. If you don't want it to happen, I've learned from my experience it isn't going to happen.

So part of the other reason I'm here I just want to say a little advertisement for Dr. Cramer and the real estate development. It's not everybody's first choice to move to Sunset Park in Brooklyn. We're moving to Sunset Park in Brooklyn because Dr. Cramer provided incubator space for us at Downstate at a critical time. And I've told her this and I've told other people this, for me to repay her support over time we are moving to the new phase 2 at the Brooklyn Army Terminal. We don't have to go there. We could go somewhere else presumably, but it's a bit of payback. Similarly, you know, we will be applying some of our investor's money to help encourage future scientific leaders. And Dr. Cramer has asked me to join her board so that we can help continue to grow the biotech business in New York. So thank you and--

COUNCIL MEMBER MILLER: [interposing] Thank you.

DR. JEFFREY WANG: --we've greatly benefitted and--and we think that the retention of

this type of program with the extension of three years is very important.

COUNCIL MEMBER MILLER: Thank you so much, Mr. Wang for your testimony, and thank everyone else for coming out. And because I've been asked to sit in, I'm going to take a privilege and say that anyone who's looking for space, should entertain Downtown Jamaica, which is the area that I represent. Jamaica is certainly booming, and there is an opportunity for Start Up New York right there at York College. So pass the word along, and I think this is great, and we look forward to moving it. And with that, ah, I welcome Council Member Rodriguez here, and with that being said, I call this meeting adjourned. [gavel]

C E R T I F I C A T E

World Wide Dictation certifies that the foregoing transcript is a true and accurate record of the proceedings. We further certify that there is no relation to any of the parties to this action by blood or marriage, and that there is interest in the outcome of this matter.

Date November 5, 2015