Foundation Fighting Blindness
***Insights Forum* Transcript**
October 28, 2021

Chris Adams, VP, Marketing & Communications:

Good afternoon and welcome to the Foundation Fighting Blindness quarterly Insights Forum. I am Chris Adams, the Vice President of Marketing Communications at the Foundation and we appreciate you joining us for today's call. Before we get started, I would like to briefly review a few details for the call. Currently all lines are in listen only mode with no video. Today's conference is being recorded and is available with closed captioning, to activate the closed captioning, please select live transcript option below in the Zoom interface, then select show subtitles.

Please note that on today's call our speakers do have their videos live, however, all their comments will be provided verbally and there are no slides. If you are using a screen reader, please be aware that the controls are at the bottom of the Zoom interface, this control bar may collapse when it is not in use. If you prefer to prevent the controls from auto hiding, go to the settings within the Zoom platform, select accessibility and then select always show meeting controls. It might be helpful to maximize your window and navigate by using the tab key, additional buttons and settings are available by pressing the alt key.

During the call, you may ask questions through the Q&A and chat features or by sending an email to info@fightingblindness.org. Again, that's info@fightingblindness.org. We will address questions today at the end of the call during the Q&A session at which time additional instructions for asking questions will be provided. I would like to now turn the call over the Jason Menzo.

Jason Menzo, Chief Operating Officer:

Thank you so much Chris, and thank you everyone for joining us here today. It is such a great pleasure to be with you all. My name is Jason Menzo and I am the Chief Operating Officer here at the Foundation Fighting Blindness. I'd like to

welcome you all to our quarterly Insights Forum webcast. The purpose of this session is to update you on the latest developments here at the Foundation Fighting Blindness and within the broader community.

During today's conference, I will summarize some of the recent progress we've made in engaging and educating our community, some fundraising activities and updates on our public awareness, really trying to highlight awareness of our mission out in the public. And then I will hand it over to our Executive Vice President of Corporate Development and Chief Business Officer, Mr. Peter Ginsberg, who will provide a snapshot of our financial performance through the end of September 2021. And he'll also highlight some recent corporate partnerships that we've established. And then our CEO, Dr. Ben Yerxa, will share several strategic updates for the Foundation and specifically our venture arm, the RD fund.

And then following Ben, we are very pleased to welcome today's guest speaker, Dr. Daniel Chung, who is the Chief Medical Officer of SparingVision, which is a genomic medicine company developing vision saving treatments for ocular diseases. On today's call, Dr. Chung will highlight SparingVision's programs, including their gene independent treatment for retinitis pigmentosa that's in development. And their recently announced partnership with Intellia Therapeutics, which is a leading clinical stage gene editing company. And then as we always do after our formal remarks, we will have a question and answer period at that time, Chris will repeat the instructions how to ask any questions you may have.

As Chris mentioned, this call is being closed captioned and a replay and fully accessible transcript will also be available on our website in the weeks ahead. We do welcome your feedback and suggestions related to this webcast or really anything about the Foundation in general. You can reach us at any time at the email address info@fightingblindness.org. And as always you can learn more about everything we're talking about today at our website fightingblindness.org.

So as we celebrate our 50th anniversary year, the message, together we're winning, has never been more true. It really speaks to our many constituents who are all coming together to fight the diseases that cause blindness. This year we have taken the opportunity to recognize the many victories we've had along the

way over the past 50 years. After a long hiatus, it's been great to get all of our many constituents together in person at 15 different live VisionWalks that took place all over the country so far this fall. The energy of getting our community together in person has been awesome.

These fall VisionWalks not only brought the community together, but also generated really critical funds to help us fund new research to the tune of over a million dollars in revenue so far this fall. And in addition to these live VisionWalks, we also had a national virtual VisionWalk, which was held on Sunday, October 17. And at this event, we not only celebrated the 50th anniversary and got everyone together virtually to walk, but we also premiered an exclusive video called 50 years of Fighting, Together We're Winning, which featured highlights of the Foundation's research and breakthroughs over the last 50 years and special moments from members of our community, reflecting on what the Foundation Fighting Blindness has meant to them. The video is still available on our Facebook page and on our YouTube channel and I encourage everyone to check it out, it was really a special time capsule of everything that's happened over the past 50 years here at the Foundation.

The momentum and excitement of our 50th anniversary continues to grow with another initiative, our livestream music series called Music to Our Eyes. In September, we hosted our fourth episode in this Facebook series, which featured two award-winning musical artists, Lachi and Apl.de.Ap from the Black Eyed Peas. We are excited that the Foundation played a critical role in actually bringing these two artists together for an original collaboration. During the event, Lachi and Apl.de.Ap premiered their song called Dis Education. If you missed the event, you can catch a replay on our Facebook page. So far this and all of the Music to Our Eyes events have garnered tens of thousands, actually over a hundred thousand views, so it's a great way for us to create awareness of our mission and the Foundation as an organization out in the broader community. We are really proud of that.

And speaking of Music to our Eyes coming up in December, we'll host our next episode, which will actually be our first real life in person concert conversation with a band called The Blind Boys of Alabama, where I'll get to speak with them face to face without a Zoom screen sitting between us. And it'll be broadcast just

like they always are on our Facebook page. I got a chance to speak with the guys from the band earlier this week and they're very excited to partner with us and have some fun stories about the band's history and their connection to our mission in this exclusive event. So stay tuned for more information about this event in the weeks ahead.

As part of our year long 50th anniversary celebration, we also launched a really important fundraising initiative called Victory for Vision. The Victory for Vision campaign is designed to be a strategic effort to deploy dynamic communications, high volunteer engagement and general growth of our major gift and legacy programs. In addition to broad based grassroots fundraising across our entire community. We set a bold fundraising goal for this campaign of an additional $50 million above and beyond our annual fundraising goals over the next five years.

I'm pleased to report that just through the first several months of the campaign and thanks to the tremendous effort of our volunteer leadership and our staff, we have already received commitments for over $20 million towards this $50 million goal from 174 different individuals, which is 40% of the goal. If you'd like to learn more about this campaign, please go to victoryforvision.org, or you can also find information on our Foundation Fighting Blindness website.

Another really key initiative for the Foundation is Lulie's Next Chapter for Light & Vision, which is our network of more than 40 volunteer led chapters across the country. We are making terrific progress in growing participation, developing leaders and providing new resources for our chapters. We have added staff to support these efforts and are engaging with hundreds of new members and leaders across the country every week. And on the heels of this, we are continuing our highly successful chapter webinars, which are educational programs open to all members of our community at no charge. Just this past year alone, we've hosted a whole series of these webinars and they have attracted more than 3,600 participants in the live setting and garnered more than 26,000 individual viewers through the replays on Facebook and YouTube.

And our next webinar is going to be coming up here next month on November 20th. The focus of this webinar is going to be on emerging therapies for inherited retinal diseases. So please mark your calendars and of course all the information about this webinar will be available on our website in weeks ahead.

Finally, our marketing team has been really busy under Chris's leadership, working on our new public service advertising campaign. The previous campaign, which launched in October of 2019 received over 908 million impressions, which is a media value of over $20 million. And so we thought it was time to update the campaign and come up with some new messaging and some new creative, which we're going to share with you here today. It really coincides with the 50th anniversary of the Foundation Fighting Blindness. This new campaign is titled Together We're Winning. It showcases how four different individuals living with vision loss continue to win on their own terms by living rich and full lives every single day.

The new campaign launched in mid-September and will drive awareness of the Foundation. It will consist of television ads, radio, print and digital advertising. I'm really proud to share this with you all today. Chris, can you please roll the television spot.

Foundation Fighting Blindness PSA:

Everyday, Mark fights retinitis pigmentosa, a blinding retinal disease, but even while his vision is taken, his family gives him hope, because whether he's helping run their business or enjoying time at home with his wife and sons, Mark knows he's not fighting alone. For 50 years, the Foundation Fighting Blindness has funded research into treatments and cures for blinding diseases, providing real hope to those fighting vision loss. And our nationwide community of local chapters provides networking and support for people with vision loss as well as their loved ones, because the best way to fight against blinding diseases is to fight together. And for Mark, winning the fight against vision loss means being there for his family. The Foundation Fighting Blindness, together, we are winning. Learn more about how you can help us end blinding disease at fightingblindness.org.

Jason Menzo, Chief Operating Officer:

Thank you very much for rolling that, Chris. Hopefully everyone who's on the call here today will have exposure to this public service advertising campaign in your local communities either through the radio or television spots or as I mentioned

in print or on the digital advertising that we'll have for it as well. It's a real important initiative and one that brings new people into the community and I'm really proud of it. So hopefully you are as well.

I wanted to end by pointing out, I'm really excited about where we are as an organization right now. The level of engagement throughout our community is running high. And to that end, we want to take advantage of the opportunity to bring our entire community together in our bi-annual Visions Conference. We are planning our 2022 Visions Conference as an in-person event next summer, June 17 through 18, 2022, which sounds like a long time away, but it really isn't, it'll be here before you know it. The meeting will be at Disney's Coronado Springs Resort in Orlando, Florida. I encourage you all to mark your calendars for this Visions Conference and look for more information, including key information about how we plan to host this event safely for all participants. This information will be rolling out in the months ahead.

So looking ahead, the short term reality of profound scientific breakthroughs is very real and we have real momentum towards accomplishing our goal. But obviously we can only do this with continued support from you, all of our constituents. So thank you for all of your generous support up until now and please continue to support us as we advance towards our mission. Now I'd like to turn the call over to Peter Ginsberg, who is our Executive Vice President of Corporate Development and Chief Business Officer for our financial and sponsorship update. Peter.

Peter Ginsberg, EVP, Corporate Development and Chief Business Officer:

Thanks Jason. Today I'll provide a brief summary of our financial position and then share an update on recent corporate sponsorships. The Foundation operates on a fiscal year that runs from July to June, so we just completed our fiscal year 2021 on June 30. Our audited financial statements will be accessible soon on our website homepage in the About Us section under Financial Reporting.

I am pleased to provide the following summary results for the fiscal year 2021 that ended in June. That year ended ahead of our expectations on both net revenue and net fundraising surplus. So our net unrestricted fundraising revenue

for the year was $23.5 million and our operating expenses were $13.9 million and that yielded a surplus importantly of $9.6 million. That compares to our original budget target of $6.7 million, so came in well ahead of our forecast.

What that means is that the Foundation is able to support nearly $10 million in new research through our fiscal 2021 performance. We were also able to fund all of our prior research commitments in addition to funding these new research commitments. I'm happy to say that for fiscal year 2022, we have budgeted for net unrestricted fundraising revenue of $27.7 million and a net fundraising surplus of $9.6 million. For the first quarter of fiscal 2022 that ended a few weeks ago on September 30th, our unrestricted revenue was $5.2 million versus operating expenses of $3.5 million for a net fundraising surplus of $1.7 million, which is ahead of budget but of course it's still early in the year.

So why do we talk about these number every time we have an Insights Forum call? We highlight this financial information on our call as part of our commitment to the retinal disease community to provide regular and transparent communication, including around our financial goals and performance. We will continue to do that in upcoming calls as well.

I want to point out that a key part of our support comes through corporate sponsorships that play a vital role in the Foundation's funding and outreach activities and I especially want to highlight that here during October's Blindness Awareness Month, all donations to the Foundation are going twice as far. That's thanks to a matching gift from two of our partners, Spark Therapeutics and AGTC. They have generously offered to match all donations during Blindness Awareness Month up to $50,000. We have a few days left here in October, so please keep that in mind.

In addition, we're excited to have new sponsorship programs with Editas and Boehringer Ingelheim. I'll give you a quick overview of those two companies. Editas is a new My Retina Tracker Registry sponsor, and also an Outreach partner. Outreach partnership is our sponsorship program that funds our key educational seminars. Editas is a gene editing company that recently announced results from a Phase 1/2 trial of its Edit101 therapeutic in patients with Leber Congenital Amaurosis 10, otherwise known as LCA 10. Editas also has earlier stage programs for other inherited retinal diseases.

Boehringer Ingelheim is also a new Outreach partner. This is a multinational pharmaceutical company that generated sales of 20 billion euros last year and has a growing retinal health pipeline focused on geographic atrophy, wet AMD and diabetic retinopathy. I'd like to conclude by reiterating that through the combined efforts of the donors and sponsors in our community, we're able to fund important new cutting edge research with the scientists and companies working on cures and treatments for inherited retinal diseases - helping us achieve this important mission. I am now pleased to turn the call over to our CEO, Dr. Ben Yerxa. Ben.

Dr. Ben Yerxa, Chief Executive Officer:

Thank you Peter and good afternoon everyone. Thank you for joining us on our quarterly update call. As we celebrate the 50th year since the Foundation's inception, I want to reflect on the tremendous progress and impact the organization has fostered in the RD community. We're 50 years old, founded in 1971. Think about where you were then, or even if you were born. The National Eye Institute had just been formed a couple years before. But since then, the Foundation has raised over $800 million to fund research. To be clear, we're not an endowment, we generally raise money and put it straight into research with urgency.

We have 56 employees in 11 states, and most of them are involved with fundraising and public health education. We have 41 chapters in 25 states and we operate as a national public charity. We funded the field for over 20 years before the first genetic cause of RP was discovered. Since then we have funded the discovery of over 280 disease causing genes. We even funded the key work that led to LUXTURNA, the first gene therapy approved for an inherited disease in the United States. Now we look forward to a pipeline of over 40 clinical stage programs in development.

We accomplished all of this because of the passion, purpose and tenacity of everyone involved. The energy and momentum of our collective team is truly inspiring, this was really evident in our most recent board meeting in which our directors and staff met in person earlier this month, we're grateful for all the families and volunteers who have been with us for the 50 year ride and for those

who have just joined the fight. One of our most notable achievements in recent years is a creation of our RD Fund, our approach to philanthropic venture funding. The RD Fund makes direct investments in companies with projects that can generally be in clinical testing in 18 to 24 months.

We continue to see exciting progress and new developments across our entire portfolio of RD Fund investments. In fact, this morning we announced that our formal fundraising efforts are underway for RD Fund 2, which will build on success of our first fund and will target at least $75 million in new capital via major philanthropic donations. RD Fund 2 has the ability to lead investments and the flexibility to make follow on investments in RD Fund 1 companies. RD Fund 2 will build on the diversity of the overall portfolio, including novel strategies based on modality, disease stage intervention, gene specific and gene agnostic approaches to help address as many inherited retinal diseases as possible.

The primary focus of the fund is to invest in therapeutics. However, RD Fund 2 does have the ability to make investments in services and technologies that help advance the mission. Today, RD Fund 2 has raised over $40 million in committed capital, which includes anchor commitments made by Paul Manning and Gordon Gund.

Thanks in part to these commitments, we were able to expand our groundbreaking initiatives with a launch of Opus Genetics, the patient focused gene therapy company dedicated to efficiently developing therapies for orphan inherited retinal diseases.

Opus is the first spin out company internally conceived and launched by the RD Fund to further the Foundation's mission. The initial $19 million in seed financing, led by the RD Fund with participation from the Manning Family Foundation and Bios Partners, will allow Opus to advance the preclinical research of its scientific founders, Drs. Jean Bennett and Junwei Sun from the University of Pennsylvania and Dr. Eric Pierce from Harvard Medical School and Massachusetts Eye and Ear.

Opus's lead program is designed to address mutations in the LCA5 gene, which encodes for the lebercilin protein. LCA5 is one of the most severe forms of LCA and affects approximately one in 1.7 million people. The company's second program will focus on restoring protein expression and halting functional deterioration of patients with retinal dystrophy caused by mutations in the retinal

dehydrogenase number 12, or RDH12 gene., This is also known as LCA13, which affects one in 288,000 people. Recent preclinical data supports the full development of the programs and Opus expects to enter the clinic with its first program in mid-2022.

Another recent development for the RD Fund was the appointment of Dr. Anthony Adamis to the Fund's Board of Birectors. Dr. Adamis, who recently served as Senior Vice President of Development Innovation at Genentech, brings over 30 years of industry R&D experience to the role. He is well known for his co-discovery of the role of vascular endothelial growth factor, also known as VEGF, in ocular disease, including diabetic retinopathy and wet age related macular degeneration. We're thrilled to be working directly with Tony, and know he will help expand RD Fund's reach.

We've also added another key new team member to the foundation team with the appointment of Rishi Donat, as chief human resources officer. Rishi succeeds Patricia Dudley, who's retiring after 15 years at the Foundation. We're just really grateful for Pat's guidance over the many years and she'll be sorely missed. At the same time we're delighted to welcome Rishi, who brings years of valuable experience working closely with employees, recruiting top talent and creating a winning culture.

In addition to all these recent developments, we continue to bring together the community to share their perspectives and research on IRDs. Last month, the Foundation hosted more than 120 researchers, therapy developers, industry executives and families for its virtual USH1B workshop to discuss the opportunity and challenges in developing treatments for Usher syndrome type 1B. Participants discussed in detail USH1B disease pathology, disease models, clinical characteristics and therapeutic opportunities. The meeting was co-chaired by Dr. José-Alain Sahel, from University of Pittsburgh Medical Center and the Institut de la Vision in Paris, and Dr. Shannon Boye from University of Florida and Atsena Therapeutics. The workshop was an important step in determining the necessary actions to get us closer to validating effective therapies and engaging all the partners, especially the patients and their families.

As I wrap up today, I'm pleased to introduce our guest speaker, Dr. Dan Chung, Chief Medical Officer at SparingVision, one of our RD Fund portfolio investments.

Dr. Chung is a highly respected healthcare leader, with a demonstrated history working the biotechnology industry and with experience spanning all phases of ocular gene therapy development. From preclinical studies through the clinical development and post-marketing activities. Dan, thanks for being here today, so, please take it away.

Dr. Dan Chung, SparingVision:

Thank you so much for the invitation. Truly it is a pleasure to be here and congratulations on the 50 years of service to the community. As Dr. Yerxa mentioned, just a little bit about me. I trained as a pediatric ophthalmologist with additional training in ocular genetics research and an NIH fellowship in retinal gene therapy. And then I was at University of Pennsylvania for about 11 years working on different modes of gene therapy and the preclinical models alongside Dr. Jean Bennett. And then I was a part of the RP 65 clinical development program there and at Children's Hospital Philadelphia, at which point Spark Therapeutics was formed. I was then recruited over there, spent about six years there in different leadership roles in the ocular space. This last February, I joined a company called SparingVision, a relatively new company. It's a company that is based in Paris, so I can't really complain about going to Paris every six weeks, but we hope to start a US headquarters here in the Philadelphia area where I am currently. SparingVision is a genomics medicine company for ocular diseases, so we're only in the ophthalmic space and we plan on using different genetic tools to address ocular diseases and that's not just gene therapy, but gene editing and a few other things.

What I'd like to explain is that the first thing that we look at is what we call a gene agnostic approach. There are three pillars that we are really looking at - one is gene therapy, one is gene editing and then more of a futuristic idea is is there a possibility of doing in vivo reprogramming of cells within the eye. When it comes to the gene agnostic approach, we are basically looking and basing our endeavors on research that was done and questions that were asked by our founders, professor Jose Sahel and Thierry Leveillard from the Institut de la Vision in Paris. Professor Sahel is now the chairman of ophthalmology at the University of Pittsburgh Medical Center.

About 20 years ago, they asked this fundamental question. Why is it that when you look at retinitis pigmentosa, there are many, many genes - 70, 80, 90 different genes. But why is it that we know that they affect the rod photo receptors or the cells in the periphery of the retina that are more about nighttime vision and peripheral vision. We understand why they have degeneration, because those genes really are geared to the metabolism of those cells. But why is it consequently that the cones or the cells that are found in the middle part of the retina that are really more for daytime vision, your best acuity and color vision - why do those cells then also degenerate?

Through their research they were able to identify a compound that they termed "rod-derived cone viability factor". They were able to find that in the NXNL1 gene, which is a nucleoredoxin 1 gene, basically they found that there was a protein that was secreted by the rods that help support the cones. And the reality is that with rod cone dystrophies of which retinitis pigmentosa is probably the biggest group, those rod cells start to die and degenerate and they lose that function to produce that protein. And therefore the cone cells start to degenerate and die as well.

The gene agnostic part comes into the frame, because it doesn't really matter why the rods are dying in the sense that it's the fact that they're no longer there, no longer able to produce that factor to keep cones alive. So that's where this gene agnostic part comes in is that simply through gene therapy, we want to re-add that RDCVF factor because the rods are no longer there to produce it. And by using gene therapy, we can put it back in to try and slow or stop the progression of disease.

So that's our goal, unlike LUXTURNA where you see a lot of restoration function, we're really aiming more towards slowing or stopping the progression of the cone cells. And really it is the idea that we want to preserve that central vision, the function of those cone cells moving forward, even if it's to slow it down by 20, 30 or 40%, that could mean significant longevity of that function.

Now, the second thing we look at is another gene called GIRK, and that is a G protein, inwardly rectifying potassium channel gene. This was pioneered by our Chief Scientific Officer, Deniz Dalkara from the Institut de la Vision. This is a little different. This is really for when cone cells are starting to degenerate and they

lose an arm like or filamentous projection that comes out of the cell body. We call that an outer segment and then it's that outer segment that something happens where it takes the light coming into the eye, it translates that into an electrical impulse and that electrical impulse is then sent through the retina to the different neurons that then connected to the brain and the brain says you can see.

Without that projection or arm sticking out, that process does not happen. But when you add GIRK to the cell body itself, we are now adding an ability for that cell body to have that electrical conversion. And so instead of doing the outer segment that it doesn't have anymore, we're enabling the cell body which is still there, we call that a dormant cone - that cone that the body is still there, but that outer projection is no longer there. And we're able to actually restore function.

This has all been shown in small rodent models, as you do in a preclinical development program. So those are gene agnostic, because it doesn't really matter what gene you have, it's simply the fact that those cells have degenerated or in the other case with RDCVF, that there are no cells there.

I know that there are some questions and this is still relatively new for us too. We just made the announcement about two weeks ago that we have a collaboration with Intellia Therapeutics, one of the leading, if not the most prominent gene editing company. They had some great results in a systemic disease earlier this year. And we were able to form a collaboration with them in which we will start looking to take and use some of their technology to really address some of the ocular diseases that maybe gene therapy can't address or maybe is not the best way to go.

While this is in its early stages, we are very excited about this partnership. It really gives us another tool to combat ocular disease. And with that being said, we're also looking at other forms of genetic tools in which we could maybe reprogram cells that are already in the eye, but they're not doing the function we want and that's really a little more futuristic. But these are the two pillars right now that are first and foremost in what we are trying to do.

That's basically us in a nutshell. It's been a great to be a part of this community, for about 25 years and I hope to continue in that capacity. I thank the FFB for the opportunity today.

Jason Menzo, Chief Operating Officer:

Thank you Dan, for joining us. We really do look forward to hearing more about the progress that's being made at SparingVision. In particular I think to a lot of the folks in our community and who are on the call here today, want to learn more about gene agnostic approaches that have the potential to impact really wide groups of people within our community and so it's really exciting.

What we're going to do now, is open it up for Q&A, it's 1:35 here on the East Coast. We've got a little over 20 minutes for question and answers. We've already got a bunch of questions that have been chatted in. I'm going to read the instructions on how to ask your questions here just to make sure that everyone has all the tools to answer or to ask any questions. So there's a couple different ways you can ask your question. First, you may access the Q&A and chat features located at the bottom of the Zoom control bar and you can type in your questions that way. Second, you can ask questions verbally, to do so select the hand raising function on the menu bar at the bottom of the Zoom interface and then we'll provide you with instructions to unmute yourself. And third, you can always submit questions via email to info@fightingblindness.org. Please note that if there are any questions that we're unable to get to today on the call, we will always follow up with everyone who asks a question via email over the next week or two. And I'm super impressed, that we've got people who have chatted in from Mexico, India, England, Kentucky, Virginia, Michigan and Ohio. I'm just seeing all the hello's throughout the first half of this call from people all over the world, which is really incredible. Thank you all for joining us today.

We've got some questions being compiled. To help us with the Q&A session, I'm going to invite all of our guest speakers, , Peter, Ben, Dr. Claire Gelfman, who's our Chief Scientific Officer, Dr. Amy Laster and Dr. Todd Durham to all come off mute and be available. We're going to start with some questions from the audience, so actually I'm going to address the first one to you Dan. There are a couple questions that have come in. When we talk about gene agnostic approaches to treating inherited retinal diseases, what do we mean? What does gene agnostic mean?

Dr. Dan Chung, SparingVision:

Right now, most of the gene therapy products that are currently under clinical development are for a very specific gene, say LUXTURNA for example, that is for folks who have misspellings in the RPE65 gene that cause inherited retinal diseases. So that is obviously done through genetic testing, so one of the most important things is really to get genetic testing. So you know which gene is involved. And even in gene agnostic, we may still need to know what gene it is because it's a class of diseases, in this case it's about retinitis pigmentosa.

The way that we have this as a rationale for a gene agnostic approach is it's all about the rod cells not being there, so the peripheral cells not being there anymore, not producing that factor RDCVF, it doesn't matter why that cell is dying or degenerating, is simply the fact that it is and not producing that factor anymore. And that factor we believe is what's keeping the cones or central vision healthy and moving forward. So simply by replacing that factor, we're hoping that the cone cells will stay more functioning for a little longer than in the natural history of disease, so that's what we mean by gene agnostic, that you could have multiple different types of genes that cause retinitis pigmentosa and that we could treat that because they have the same kind of sequence of degeneration of the cells, rods first and then leading to cone degeneration and the idea is that we will preserve the cones.

Jason Menzo, Chief Operating Officer:

Thank you, Dan. Claire, I'm going address the next question to you,. We also hear not just gene agnostic approaches that Dan just spoke to, but also gene therapy, so gene specific approaches, maybe you could talk a little bit about the difference between gene editing and what we think of traditional gene therapy.

Dr. Claire Gelfman, Chief Scientific Officer:

Jason, thank you. When we think about more traditional gene therapy, you've been diagnosed with an inherited retinal disease. You get genetic testing and you know exactly your specific mutation. One way to consider restoring function is by

giving back a corrected copy of the entire gene. So we talk about gene augmentation therapies, traditional gene therapy, we're giving back an entire copy of the gene that's mutated, so the right protein can now be made and photo receptors can function properly.

Gene editing is different in that it's going in with a pair of what we call molecular scissors directly to the specific mutation and editing it, fixing it if you will, restoring the correct nucleotide, so the DNA now looks like a normal copy and can make the correct protein. So in one example we're giving back an entire gene to restore function. Gene editing, we've heard a lot about CRISPR for example, is where we go in and edit at the specific site in the DNA to make the correct protein.

Jason Menzo, Chief Operating Officer:

Thank you, Claire. That's very helpful. Dan, I'm actually going to come back to you with another really specific question that was chatted in, which is about the timing of when we expect clinical trials to start for some of the programs at SparingVision.

Dr. Dan Chung, SparingVision:

We're hoping that we will be in the clinic by the end of next year. There are a couple of things that have to happen between now and then, but that is our projection.

Jason Menzo, Chief Operating Officer:

Okay, very good. Thank you. There's been a number of questions being chatted in about this particular webinar and whether or not it'll be available on replay. The answer is yes. So anyone who missed part of this webinar, joined late or was having difficulty hearing or listening in on any of the content, it will be available on replay on our website in the weeks ahead. Todd, I'm going to actually ask you next about the My Retina Tracker Registry. Folks have asked quite a few questions

about that. Maybe you could just give a very high level overview what the Registry is and how individuals can participate in it.

Dr. Todd Durham, SVP, Clinical & Outcomes Research:

Happy to do that Jason. And I apologize my camera is not working despite rebooting several times today. I have seen a couple questions come through the chat box about My Retina Tracker Registry. First thing to know about the Registry - it is an observational study where we intend to follow the impacts of inherited retinal disease on folks' lives. It's also a way to track genetic cause of disease so we can answer researchers' questions about prevalence of various gene mutations.

It is also a way that we connect members of our Registry with research opportunities. I just typed out an answer in the Q&A box to one of the questions. We try to keep up with all of the clinical trial updates by resending very specific emails out to members of the Registry. It is very much at this stage a manual process, so certainly there are ones that we don't get to. But the other thing I would say is that when we have partners like pharmaceutical companies or biotech companies developing gene therapies who ask us to help them recruit for clinical trials, we do send out very specific announcements and targeted invitations to connect members with those clinical trial opportunities.

I encourage you to reach out to anyone here on the science team, including myself if you have questions about ongoing research opportunities. We're always happy to answer any questions about those. And I'll answer another question that came up in the chat box. We encourage everyone to stay informed about clinical trial opportunities on clinicaltrials.gov. That's the relatively current listing of clinical trial opportunities and can be a useful starting point for conversation with your own ophthalmologist, specialist or treating eye care professional.

Jason Menzo, Chief Operating Officer:

Thank you so much, Todd. Claire, I'm going to address the next question to you. Obviously there's been a lot in the news over the last year with mRNA technology

being involved and helpful as it relates to the COVID 19 vaccines. The specific question is with how rapidly that technology was able to be developed for COVID 19. Why are the treatments for RP that are using the same mRNA approach move quicker, or how does maybe what we learned from mRNA involved in the COVID-19 vaccine going to help us advance treatments for RP?

Dr. Claire Gelfman, Chief Scientific Officer:

Thank you, Jason. It's a really good question, I think that one of the things that's coming out of all the COVID work is how quickly the vaccines were developed. Record speed time. This really became kind of an all hands on deck effort which really helped us get the vaccines as quickly as we did. With retinitis pigmentosa, it's important to remember first that, while there are some RNA modulation therapies that are being evaluated, it's not the same type of gene therapy that is being used for the COVID vaccine. Certainly there are learnings that will be translated, but I think as we fund more work in RP and we have more outstanding scientific researchers over the world working to develop the best treatment for retinitis pigmentosa, we will continue to see an advancement in that area, especially utilizing these mutation agnostic approaches where more people will be available for clinical trials regardless of their specific mutation, as Dan was describing. So I look forward to helping that accelerate the availability of clinical trials for more people with retinitis pigmentosa and other inherited retinal diseases.

Jason Menzo, Chief Operating Officer:

Thank you so much, Claire. Our next question, I'm going to direct to Dr. Yerxa. It is a question specifically about the gene RDH12 and that being one of the targets for Opus. So maybe you could share a little bit about that program and anything else that's relevant for RDH 12.

Dr. Ben Yerxa, Chief Executive Officer:

RDH 12 is the second program that we planned to put into full development at Opus Genetics. The team is still working through timing for IND filings and so on. Once the company has figured out what that timing looks like, we'll give an update to the community so you have visibility on the timing of that, but Opus is officially launched. It's a tiny little company with just a few employees and operating virtually, but RDH 12 is one of the top priorities of the company, so stay tuned.

Jason Menzo, Chief Operating Officer:

Thank you Ben. Amy, there's a bunch of questions that come up not only on these calls, but also come up as we speak with constituents all the time. We talk about how we raise all this money and then we fund research. Could you speak about how the grants, awards and programs that we have are actually fitting into helping to advance our mission.

Dr. Amy Laster, VP, Science & Awards Programs:

Thanks Jason. Really great questions. We talk a lot about what's happening in the clinic, clinical trials and that's where we want to be, but it actually has taken a lot of what we call preclinical research to get there. So where the Foundation really inserts itself in that area is investing in those academic research laboratories that build the pre clinical research and the information that's needed to advance therapies into the clinic. One thing particularly about the Foundation, obviously there are other funders including the government, but really we're able to support those research projects that may not get picked up by government funding in very early stages.

We're talking about inherited retinal diseases, these are fairly rare. And so often times, IRDs don't get the attention that needed, so the Foundation is able to really move this field forward by giving academic laboratories the resources, training individuals that are coming up to really boost their career in this field, keep them in this field. A lot of the clinicians that you're talking about are

individuals that we've funded. And so together that really has moved the field forward so that we are talking about clinical trials.

Jason Menzo, Chief Operating Officer:

Thank you, Amy. Hopefully that helps to answer that question for everyone who is thinking about that. Dan, you've got such a unique role and position here in the field, not only with your role with SparingVision, but obviously previously as a clinician scientist and then also the role you had with Spark Therapeutics, so I've got really two questions. One is building on the question with gene agnostic approaches and specifically around whether gene agnostic really can encompass broader than our piece. So for example syndromic, usher syndrome patients, but they be potential beneficiaries of a gene agnostic approach, like what we're seeing here with SparingVision.

Dr. Dan Chung, SparingVision:

When it comes to the whole gene agnostic process, we're basically targeting retinitis pigmentosa, because it's one of the biggest groups of what we call rod cone dystrophy. But there are other rod cone dystrophies out there such as choroideremia and others that follow that pattern of rod degeneration, then followed by cone degeneration. So it is just an example. When it comes to syndromic diseases however, these ocular gene therapies really will be to address the ocular components of the disease. And especially in this gene agnostic approach, it's specifically geared toward the idea that you've lost your rod photo receptors and it's no longer producing the factor when we're trying to save your cones.

So it really wouldn't have an effect on other systemic manifestations of the disease. That's the one difference with gene augmentation that can in the future treat other organ systems because there you're actually replacing or adding the gene that has the misspelling in it, but for this strategy of gene agnostic, it's really about the ocular diseases.

Jason Menzo, Chief Operating Officer:

All right. Thank you. And then second question for you Dan, is you played such a pivotal role in the development of LUXTURNA. There's a few folks and this does also come up pretty frequently, not only in this webinar, but outside of it which is the story of what is LUXTURNA? It's the first approved product for any inherited retinal disease, but maybe you could just share a quick thirty second overview on what LUXTURNA is and who could benefit from it.

Dr. Dan Chung, SparingVision:

LUXTURNA is the commercial name for the gene therapy for the RP-65 gene. RP-65 causes an early onset form of Leber congenital amaurosis or early childhood retinitis pigmentosa in some cases, later onset RP. This is what we call gene therapy in the sense of gene augmentation. So in these folks, they have a misspelling in the RP-65 gene, so they get the blinding effects from that. What this does, is it uses an adeno associated virus - that's just the vector or the way that we get the DNA into the cell and it replaces or adds a copy that does not have any misspellings in it. And because of that, it restarts the function of that missing gene. And in this case, it's actually restorative, we've seen improvements in visual function in the folks that have received this product.

It was approved in 2017 as the first FDA gene therapy for a genetic disease and this really is the brain child of many folks at the University of Pennsylvania Children's Hospital, Philadelphia in particular, of course, my mentors, Jean Bennett and Al Maguire, at UPenn. It took obviously an army of folks to get this through. Spark Therapeutics was the industry group that took this on to finalization commercialization. I'm not sure I can say the number of countries that it's in, but Spark partnered with Novartis to do worldwide marketing of that product and they are in many, many, many different countries outside the US and the European Union.

Jason Menzo, Chief Operating Officer:

Thanks Dan. We've got a question, and Ben, you spoke a bit about the RD Fund and one of the companies in our portfolio for the RD Fund is Nacuity. What is Nacuity in general, what their approach is, and then also specifically about our role as a partner collaborator investor in Nacuity?

Dr. Ben Yerxa, Chief Executive Officer:

Nacuity is a really cool company that is working on a gene agnostic approach. It's an antioxidative approach to preserving vision in patients with retinitis pigmentosa and similar conditions. They're actually in the clinic in Australian patients, so they're a little bit off the beaten track. They have been very creative by going to Australia, especially during the pandemic. They've been able to conduct their trial in Australia, probably faster than they could have in the United States by going down under. The company is backed by the RD Fund, we helped get them off the ground several years ago by kind of a matching co-invest with other investors. And they're in the clinic, we got to wait and see how they do, but it's a very promising gene agnostic approach for IRDs.

Jason Menzo, Chief Operating Officer:

Thank you, Ben. Right now it's 1:54 here on the East Coast. We've got about five, six minutes left before we wrap up. We've got a bunch of questions that have come in, but we'll pick probably one or two and then again, just want to reiterate that everyone who's asked a question, if we didn't get to your question here live in the meeting, we will follow up with you via email afterwards. So, Todd, I want to ask a question directed to you. Folks have heard the term natural history studies quite a bit, and for those who review our annual reports. We dedicate quite a bit of resources to natural history studies, so maybe you could talk a little bit about how they help advance their mission and how they play a role in advancing treatments.

Dr. Todd Durham, SVP, Clinical & Outcomes Research:

Yes, there are several ways to think about natural history studies. The basics are that it is an observational, that means a non-interventional study, where we are following from a single point in time or over a period of time in a longitudinal sense to get a sense for how a disease progresses. And the reasons why these kind of studies are important is we really need to know when is the ideal time to intervene in the course of a disease, as in what kind of cell types are still viable for treatment, how quickly does that disease progress? What are some of the ways that we measure the progression of that disease? Because when we get to a late stage clinical trial, we often only have one or maybe two tools that we use to measure the benefit of a given therapy. And they need to be pre-specified for regulators to accept the study.

So you really want to understand which ways that you're measuring the benefit are sensitive, that means they pick up on real change, that they're repeatable, they're ideally objective and ideally in our case that they measure something that's important to patients or people affected with an IRD something about visual function. So these studies are really designed to help optimize the design of clinical trials, so we can have successful product development.

Jason Menzo, Chief Operating Officer:

Thanks Todd. I've got about four minutes left, I'm going to try to squeeze two and a half questions into that four minute period. Amy, I'm going to direct the first to you. A lot of news recently also about the term optogenetics as a new modality to treat inherited retinal diseases and also dry AMD. Maybe you could just give a lay person's explanation as to what optogenetics is.

Dr. Amy Laster, VP, Science & Awards Programs:

With optogenetics, and I'll just take vision. In retinal degenerations, the photo receptors typically are the cells that sense light and gives us vision, but during retinal degeneration as they die off, then you lose vision. And so the technology

of optogenetics is really using other cells, other neuronal or retinal cells within the retina to sense light.

There are cells that sit just beneath the photo receptor that's typically connected to the photo receptor and they're still living and they're still connected to the pathways to our brain that perceives vision and so the optogenetics is using a sensor to turn those cells on, make them light sensing so that as we perceive light, that signal gets to the brain still and allows us to perceive light.

That's a very simple way, as I said, that this is really when photo receptors have died. This is a late stage treatment when all of your light sensing photo receptors have degenerated.

Jason Menzo, Chief Operating Officer:

Thank you so much Amy. And then Claire, I'm going to address the last couple of questions there. Same question, just two different areas of inherited retinal disease. One is, can you share a quick update on what's happening in the world of Best disease and then similarly some advancements that are happening in Stargardt?

Dr. Claire Gelfman, Chief Scientific Officer:

For Best disease, different approaches are being taken, one is the more traditional gene therapy approach where a good copy of the Bestrophin-1 gene is delivered. This is a mix of protein that is expressed in the retinal pigment epithelium at the very back of the eye. So the alternative approach in addition to a gene therapy based approach is to restore the milieu of those RPE cells to the back of the eye. So more cell-based therapy to restore function to the cells that normally make this particular protein.

In the case of Stargardt disease where central vision is lost first, there are several different companies that are utilizing an approach to create the degeneration that happens in individuals with Stargardt and in this particular disease, the visual cycle is so active that the vitamin A that really triggers the visual cycle results in the buildup of these toxic byproducts. And so there are four or five different

companies that are looking to reduce the amount of vitamin A so that the visual cycle is still happening so we can see, but not so much so that these toxic byproducts built up and compromise vision.

And interestingly, these companies that have products in clinical trials for Stargardt are actually being delivered systemically, so orally, not necessarily through direct delivery to the eye. So it's kind of a unique approach to think about treating an ocular disease where the drugs are given systemically to slow down the visual cycle and prevent photo receptor degeneration.

Jason Menzo, Chief Operating Officer:

Thank you for that, Claire. And there's an individual that's chatting in that has a real passion to learn more about Stargardt disease. And I do want to share with you that there are many, many people particularly in our community that are affected with Stargardt. You're not alone and there's a lot of activity. And to Claire's point, there's a lot of activity that is in the clinic or near to the clinic for Stargardt.

And in particular, I really encourage you just from a connection standpoint and I encourage everyone actually who's participating today in our community to check out Two Blind Brothers. Brad and Brian Manning are two brothers in New York City who started a clothing company and they both are effected by Stargardt. They have a great community - they have a lot of videos and information. They sell these awesome clothing items and all the profits that they generate from this company actually go to fund research through the Foundation Fighting Blindness.

So anyone who's listening in today that has Stargardt, or has a interest in learning more about Stargardt, not only can you learn more through us, but there's a great community through Two Blind Brothers. So with that, it's 2:02 here on the East Coast and we're going to wrap up today's call. I really do want to thank everyone from Germany and England and the United States and India all over the world. We had people from all over the world today, which is great and really want to thank you all for carving out time to spend with us.

And as a quick reminder, there will be a transcript and an audio recording of today's call available on our website within the next week and our website

fightingblindness.org is a great resource. There's so much information in education, news, in addition to what we put up on Facebook, Twitter, LinkedIn and Instagram, these are all great resources for learning about the latest developments in the retinal degenerative disease space. And of course, if there's any other information you need or we could be of any help or use or give feedback for us, please reach out to us by sending an email to info@fightingblindness.org. Thank you all so much for joining us and have a great rest of your day.