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<<Jay Olson, Analyst, Oppenheimer & Co. Inc.>>

Good morning. I'm Jay Olson, one of the Biotech Analyst at Oppenheimer. And it's truly an honor to introduce Frequency Therapeutics at our Fall Healthcare Summit. We have an outperform rating on Frequency with a $15 price target, and it's a pleasure to host CEO, David Lucchino on a day when you have some exciting new clinical data. And if anyone in our audience has questions, please feel free to submit them or if you prefer, you can email me at jay.olson@opco.com.

And with that, we'll get started. David, thank you so much for joining us today. We really appreciate this update and are really excited about your new data that you reported this morning.

<<David Lucchino, Co-Founder, President and Chief Executive Officer>>

Jay, its great to be here. Thank you very much. And we always look forward to this conference. Again, as Jay had mentioned my name is David Lucchino and I am the President and CEO of Frequency Therapeutics. And as I just mentioned, I want to thank the Oppenheimer team for the opportunity to participate here today. It is a real honor for us. Following today's remarks, we will be taking questions, so please pour them to Jay or we'll have a section after this to answer them with some of my colleagues.

So our company Frequency Therapeutics has leading a new category in regenerative medicine. And this is a really important point. We aim to restore human function by developing therapeutics that activate a person's innate regenerative potential all within the body. And we're doing this first in hearing loss where we are in a path of deliver the first therapeutic, your restore hearing for the most common form of hearing loss.

We're also bringing the same underlying regenerative science to multiple sclerosis where we have seen early restorative signals in vivo in remyelination. Both hearing loss and multiple sclerosis can have a debilitating impact on patients. Our small molecule treatments aim to address and even reverse these degenerative diseases. Frequency has several clinical and research efforts for which I will provide updates today. I will also detail our path forward as we look towards potential catalysts in the year ahead, as well as news released today from our hearing program where we observed new statistical significant responders. I will be making forward-looking statements. I would refer you to our SEC filings for any additional information.

So to level set Frequency's lead program is pioneering a new field in hearing restoration. Currently, there are no medicines to treat hearing loss, a condition that affects hundreds of millions of people worldwide and has been associated with comorbidities from depression to dementia. For most patients with hearing loss, even though it's with assistive devices the primary complaint is lack of clarity. So for example, I can hear you, but I can't understand you.

Frequency aims to solve this urgent and complex challenge by regenerating sensory hair cells in the inner ear and restoring speech clarity.

To that effect, we have shown and have published the first ever statistically significant and clinically meaningful hearing improvements and clinical trials, specifically improving word recognition. We also believe that our deep expertise in inner ear biology, drug delivery and audiology pair clinically and commercial – paired with our clinical and commercial experience give Frequency a unique ability to advance hearing restoration therapies across the auditory system.

To date, we have shared results from four exploratory clinical studies designed to assess potential gearing benefit in a broad range of sensorineural hearing loss patient populations. Approximately 170 patients have received FX-322 dosing to date. Data from these trials are helping us hone in on optimal patient populations for our lead drug candidate called FX-322, and do inform the design of a new Phase 2 trial that we plan to initiate in the fourth quarter of this year.

At an R&D event plan for November 9, we will layout the data from all of our clinical studies and describe the insights guiding our approach. We're also continuing to highly productive global partnership with Astellas Pharmaceuticals on the development of FX-322. As I mentioned, Frequency has also observed early in vivo regenerative signals in MS. We're activating the body's own oligodendrocyte precursor cells to remyelinate axons can potentially restore patient function and mobility.

We're now following these restorative [indiscernible] (0:05:03) to develop medicines for MS with the same underlying regenerative science that we're bringing to hearing loss. Today, there are no medicines to treat hearing loss. Hearing loss sufferers only have devices such as hearing aids and cochlear implants, helpful solutions, but technologies where there have been limited innovation, which if you think about it is remarkable. As hearing loss represents one of the largest causes of disabilities across the globe. The World Health Organization estimates nearly 1.5 billion people globally suffer from some form of hearing loss, but today, only 20% of people that could be using hearing aids actually use them.

Still, the U.S. hearing aid industry brings in more than $10 billion annually, and now consumer devices companies such as Bose are entering the field with so called the counter hearing aids solutions that can help patients, but do not get to the root cause of lost hearing. In the U.S. alone, more than 41 million individuals are known to be impacted with sensorineural hearing loss, but the real numbers, we suspect are substantially larger.

We believe that with a safe and effective restorative treatment, there should be a substantial market for new therapies. And we are focused on charting a path to transform the standard of care for individuals with sensorineural hearing loss. One central reason for the relative limited use of assistive devices is that for most patients with hearing loss, the primary complaint is lack of clarity. This is because today's treatments for hearing loss, amplifying devices, such as hearing aids are effective in making sounds louder, but they're are limited in their ability to improve the clarity of speech and sound intelligibility.

And today, we know that there's a tremendous demand for restorative therapeutic options. This past May in FDA forum led by the Hearing Loss Association of America, where patients were given a survey said that hearing restoration and specifically solutions to enable clear hearing is by far the most important intervention they would like to see. The impact of this unmet need on daily life is significant, effecting how people with hearing loss communicate our belief here at Frequency is that we're storing healthy hearing can improve communication and rebuild the connections between people with hearing loss and the world around them. Connections often loss due to impaired speech, understanding and comprehension.

The inability to understand and communicate can also have a considerable impact on human health. As hearing loss is associated with several other serious neurological conditions. In 2020, a study in the Lancet identified hearing loss as the largest potentially modifiable risk factor for developing dementia. Other studies have connected hearing loss to depression and additional serious diseases.

Through COVID, we've all experienced some degree of social isolation, and there are parallels in terms of mental health issues, people experience as a result. We believe that addressing hearing loss can have additional important health benefits beyond treating the condition itself. And that there is a considerable link between hearing health and overall health. Frequency was started seven years ago based on the research by MIT Institute professor Bob Langer and Jeff Karp at Harvard Medical School, who recognize the potential to use small molecules, to activate progenitor cells in the ear and potentially restore hearing.

The key insight underlying our approach is the discovery or the synergies between biological pathways that caused the activation of progenitor cells. This approach was initially demonstrated in the gut where progenitor cells actively regenerate the lining of the stomach. This insight also led to the discovery of FX-322 our lead program. The underlying biological cause of hearing loss for those with sensorineural hearing loss is well established though can be multifactorial. For one of the primary root causes of the loss of sensory hair cells in the cochlea and the inner ear. This can be due to age, noise, medications that are toxic to the ear or the result of sudden trauma in the ear.

The sensory hair cells are responsible for translating complex sounds and the signals that the brain can interpret. When these cells are damaged or destroyed, hearing loss follows. Many species like birds or reptiles can regenerate these sensory cells and restore hearing. While humans are not programmed to activate these cells, once they're gone, the mechanisms to restart this process is actually in place. It just needs to be turned on. We believe at Frequency that FX-322 presents an elegant approach to potentially regenerating these sensory cells.

FX-322 is comprised of two small molecules that act synergistically to activate progenitor cells and in turn regenerate lost hair cells. Our approach lead to the activation of specific pathways that drive progenitor cell activation. Something that was clearly demonstrated in our preclinical studies. The discovery of pathways activated by these two small molecules was foundational to the founding of frequency and as well defined and protected intellectual property.

FX-322 is administered into the ear of patients using a standard and routine intratympanic injection. This procedure can be performed in an ENT office and takes minutes to complete. FX-322 is a liquid that is delivered locally to the middle ear though the ear – through the eardrum where then forms a gel. The gel contacts the round window membrane allowing the proprietary small molecule drug combination to diffuse into the inner ear. FX-322 initially concentrates in the higher frequency regions of the inner ear where sensory hearing loss traditionally begins.

We believe that the simplicity of FX-322 administration has an important attribute that gives support future broad commercial uptake. To understand where FX-322 may be having an effect, we use several standard tests, tests that move beyond the traditional audio gram, which is just test audibility or loudness to word recognition tests that assess intelligibility of speech. As I describe hearing clarity is also a critical concern for patients and we're working with key opinion leaders across the audio logical and auditory sciences to define the tools that can be best used to further understand an individual's intelligibility deficits.

Gaining a deeper understanding of the full spectrum of hearing loss is an essential component of the treatment of treating sensorineural hearing loss and to advancing meaningful new treatments for patients. FX-322 is now the only drug candidate to repeatedly show a demonstrated effect in improving the ability of human subjects to better recognize words. Having done so in two separate studies with several subjects having doubled their scores and word recognition tests. These were both controlled studies, including a placebo controlled Phase 1/2 study, and a Phase 1b study that utilizes a contralateral untreated ear as a control.

Let me summarize for you a few key points. From an efficacy perspective, we saw very interesting results from both studies and we believe that the data represents the first evidence of any drug to show meaningful improvements in hearing clarity. Moreover in both studies, more than 30% of subjects had a greater than 10% increase in their word recognition score. I figured considered to be the threshold for a clinically meaningful difference in hearing. And the safety profile was favorable beyond some mild events related to the administration. There were no notable adverse events observed. We also look to understand whether the benefits of hearing clarity could be maintained over a longer period of time.

From our Phase 1/2 study, we re-evaluated five of the subjects that initially had responded with word recognition tests performed at time points between 13 and 21 months following a single dose of FX-322. Four of the patients were observed to have maintained the hearing benefit, three of which remained statistically significant. Together, our initial study data provides encouraging evidence indicating that FX-322 can result in a clinically meaningful improvement to hearing clarity and that these benefits may be sustained over time.

In addition, earlier today, we announced new data from a long-term evaluation of nearly all subjects for our open-label study of FX-322 in individuals with sensorineural hearing loss. As mentioned, we initially had five responders in this study who showed statistically significant improvements in that. And then when we brought the subjects back, we observed four additional subjects that had been treated upward in their 90 day tests, which now showed excuse me, we are now statistically significant 12 to 18 months after administration.

So just to clarify, now, nine out of 33 people in the study have shown statistical significant improvements and word perception with a single dose of FX-322. The improvements were all in treated years when compared to pretreatment baselines. And importantly, there were no improvements in the untreated ear. Moreover of the five subjects that had statistical significant responses at day 90, four that returned for evaluation, always scores that remained above their baseline word recognition measures though were below the threshold for statistical significance.

These data gives us further confidence in FX-322 responders see a sustained effect, but we also learn that because of the heterogeneity of the inner ear, it's likely that some individuals were spawn later than others. We will use these insights as we designed further studies consider additional time points to review subjects while also working to understand where effectiveness of FX-322 may start to wane. Earlier this year data from our Phase 1/2 study was published in a leading journal in the field Otology and Neurotology. And later this month, we have another publication and a key journal that will also detail our preclinical work.

Our understanding of FX-322 clinical profile has been informed by multiple clinical studies, which have been critical to run a sensorineural hearing loss has many different causes. It's not positive – it's not possible even with the most sophisticated imaging to see inside the cochlea. So our approach has been to conduct learning studies with FX-322 across a range of age groups, etiologies and disease severities. Though the effective – through the effective date, we have learned about dosing and administration and about FX-322 safety and tolerability, and our ongoing analysis points to sustain overlap and the patients that have responded to treatment.

Having an observed signal gives us the unique opportunity to test for that sign for that signal in different patient populations and given the different etiologies and severities of hearing loss, the learning from these studies have been invaluable. We believe this broad approach has been essential to understanding the breadth of sensorineural hearing loss patients. We may be able to treat in the future and we are now planning a new confirmatory Phase 2 study in a more refined population.

As leaders in the field with no established path for hearing restoration therapies, we believe that our approach has given us the clear and directive path forward, put simply this is a drug – this is drug development, and we will continue to learn as we look further to refine populations for later stage studies. So we are planning to go. So where we plan to go from here with FX-322, we have observed a hearing signal and subjects have shown a clinical benefit. Our studies show that a single administration of FX-322 has linked to this clinical benefit and we will move forward as such.

And as we have started to identify specific types of patients that are the best candidates for future development, with more studies learnings to be shared in the months ahead. Based on all of this data, we'll soon communicate our plans for a new Phase 2 FX-322 placebo-controlled study.

As I mentioned, beyond our hearing program has a second preclinical program in multiple sclerosis and we again are following the same restorative signals to develop medicines for MS with the same underlying regenerative science that we're bringing to hearing loss. Today's

multiple sclerosis treatments are effective and slowing the disease progression or addressing symptoms, but do not reverse this degenerative and debilitating disease.

Our goal is to activate the cells needed to restore myelin, potentially reversing damage. We have researched efforts underway to confirm the optimal combination of molecules for a future clinical program. And we are looking forward to providing insights into the program at our R&D event in November. This will include our scientific approach towards compound selection and in vivo data. We believe that the simplicity of our approach to regenerate medicines has a number of benefits over gene and cell therapy approaches.

First, we are using small molecules that temporary activate regenerative cells that are already located within the target tissue in the body. We require no cellular engineering, no ex-vivo cellular manipulation and no gene therapy vectors. Put simply, our approach benefits not changing the genome or requiring complex manufacturing approaches. Mechanistic simplicity of our approach may provide real advantages in our pursuit to develop therapies that activate a person's innate regenerative potential within the body and restore human function.

In summary, we are very excited about both our hearing and MS programs. We have already obtained what we believe to be compelling clinical data showing, hearing restoration with our lead FX-322 program and the Phase 2 study data has provided us critical insights into dose administration and study design. We will continue to gather clinical data and in November, we will share plans for future development and for potential growth in our pipeline.

Our company is also fortunate to have a strong cash position and a productive partnership with a Astellas. As a leader in a new area of regenerative medicine, every experiment in every study shows us something that has never before been seen. We are highly encouraged by the potential of our science and the benefits it may bring to patients as we work to transform the standard of care for those with hearing loss and MS.

Finally, a quick advertisement. On November 9, we will be hosting an R&D event for investors. There, we will detail findings from all of our FX-322 clinical studies and how these results have helped us form the basis for our enthusiasm and the program, and have supported the design of our upcoming Phase 2 clinical trial.

In addition, we plan to discuss other potential near-term and long-term areas of pipeline expansion, including continued advancements in hair cell regeneration, as well as the progress we have made in our preclinical program for remodelization in multiple sclerosis. We hope to see you there. Thank you very much for your time today. And I look forward to your questions.

Q&A

<Q – Jay Olson>: Thank you, David. We really appreciate your bringing us up to speed and all the exciting work you're doing at Frequency. I apologize. My WiFi crashed and I've dialed in. So I'm no longer on video. But we do have a few questions coming in. So maybe I'll kick things off asking you about the latest data that you shared with us this morning from your FX-322-111

open label study. Could you maybe talk about any thoughts around why FX-322 may have hearing improvement over extended periods?

<A – David Lucchino>: Sure. And before I answer that, I've asked through my colleagues to join Carl LeBel, our Chief Development Officer; Chris Loose, our Chief Scientific Officer; and Kevin Franck, our Senior Vice President. So I'll also be asking them to comment. I'll kick off and then I'll ask Carl to jump in with his thoughts. As we've seen in preclinical work FX-322 is working with the body. We believe in a way that is authentic to how progenitor cells will have a bifurcated response to what we're doing.

That response is unique to each individual just as the type of hearing loss that each individual experiences. And so it's not surprising to us that we were pleased to see that not only day 90, did we have responders, but we saw people moving – new additional people move into the statistically significant range somewhere between 8 and 12 months. And it all really gets back to everyone's unique sort of biological composition. Carl, would you like to add your thoughts?

<A – Carl LeBel>: Just echo, this is really a little bit of heterogeneity to the condition itself. So like David had said, we're studying different etiologies of those subjects have different severities of hearing loss. So those differences seem to be exhibited and manifest in different responses to the drug. And that's really a different timing. So we have a group of subjects that responded three months after treatment, and now we've got a group that's showing response in roughly the 10 months range. So we're going to just keep studying that continuum, but it's really exciting to see more patients are responding to treatment.

<Q – Jay Olson>: Absolutely. We totally agree with you. It's really nice to see these responses at extended periods. And another question that we're getting here is, if you've seen any similar findings from other studies or maybe anecdotal cases of extended responses from other trials.

<A – David Lucchino>: Carl, you want to take that, that's something we've discussed.

<A – Carl LeBel>: Sure. Well, David presented in the first study that we did the chooser one or that Phase 1/2 study, our very first trial, when we brought those subjects back, the ones that had responded by day 90, when we brought them back, roughly one to two years later, they were somewhere still showing response.

Now this new study we're bringing subjects back. And so I think what this does is indicate to us, we're going to then bring a level of flexibility to all of our trials to continue to study how sustained are those responses. And are there other subjects that are not responding early, but respond later? And what are the characteristics? So this is just a new part in the program that we're really excited about.

<Q – Jay Olson>: Great. And then another question is about any differences that you may have seen between the early responders versus the late responders that could help us understand those delayed responses.

<A – David Lucchino>: Kevin Franck, you want to take that.

<A – Kevin Franck>: Sure. Thanks for the question. When we look at the overall profile of these subjects who responded earlier versus later points, we look for differences in all kinds of things. And one of the areas where we've seen perhaps a trend is the people who did better later on may have started with better abilities to understand speech. But we're going to be studying that a lot more as we move forward.

<Q – Jay Olson>: Okay, great. And then, I guess, another question related to that is, do these new findings from your FX-322-111 study have any impact on the design of future studies, including your new Phase 2 study design?

<A – David Lucchino>: Yeah, I would – I'll comment on that and then open it up to the team. Listen, we're in a – because we're – we believe we're leading in this field, as part of that responsibility as we need to continue to ask smart questions clinically. And as I said, because you can't image the cochlea, we have to design, we have design, we'll continue to design smart, , probing or educational studies. Applying those and rolling those up with a really thoughtful analysis something that this team has done well. And he is definitely influencing the design of our upcoming Phase 2 study, as well as all the learnings from the previous FX-322-202 study that had designed issues related to it, but was extremely helpful at allowing us to refine and put together what we believe will be high quality Phase 2 study that we'll talk more about here coming up with R&D Day.

<Q – Jay Olson>: Excellent. And I'm glad you mentioned that and you gave us a little bit of a preview of the agenda on your November 9, R&D Day, we're super excited about that and looking forward to hearing more anything in particular you'd like investors to watch out for on November 9th.

<A – David Lucchino>: Well, what I would say, and then I'll ask Chris Loose to author his thoughts is. Listen, from the very beginning, we understood that by leading, we needed to sort of do this brick-by-brick, follow the science, believe in the science, be your own toughest critics. And how you manage the ups and downs of that process. I believe we're at an inflection point for having the potential to create meaningful shareholder value. Has we understand and apply those insights? A lot of those will be manifested and what we'll talk about with the additional Phase 2 study that we have coming online. I think we're applying those insights broadly, as we think about our MS program, which is, I think, investors can see, there's something pretty tantalizing there, and we'll share more about it at R&D Day. I don't know, Chris, if you want to offer your thoughts as well.

<A – Chris Loose>: Yeah. Thank you, David. We'll be doing the holistic review of our clinical data, where we have 175 treated patients today, and that's a lot of information from which we can draw insights and learnings across populations and trial designs. So we'll pull those insights out and that'll help frame how we're looking forward towards the next stage of our clinical work. And as David said, we're committed to being leaders in this space, we have a deep belief in progenitor activation, and we'll begin to talk more about what we've been doing in the pipeline preclinically both in hearing and in multiple sclerosis.

<Q – Jay Olson>: Excellent. And that was actually another question that we had here is anything we should be looking out for on the MS front on your R&D Day.

<A – David Lucchino>: I'll kick off and then Chris, you should offer your thoughts. Listen, I mean, so much of the value proposition of what we do of creating, what we believe is a disease modifying effect gets down to deep biological justification for what it is that we have and understanding how to do this all within the body, using small molecules to signal a localized healing response.

And we've seen that and have published on that in hearing. And we believe that we're able show – we're going to be able to show the same level of potential clinical impact in MS. In an area where there's a huge unmet need and in an area that investors are familiar with, we recognize that investors have to do more work in the hearing space since there are no hearing therapies. But in MS, this is going to be a space where a lot of investors have backgrounds. And we think with that expertise that they have and the data that we're going to be showing and developing, we think we're going to only build our – build upon the credibility we've already established. Chris?

<A – Chris Loose>: Yeah. We're very excited about the approach of activating progenitors within the body and the disease modifying effect that can create a range of diseases. And we've rightfully been very focused on hearing and will continue to be so, and our communications and our work. But the work we've been doing preclinically in MS has been very much maturing. And we look forward being able to share some data in that space and begin to educate the outside world on how this approach applies with the breadth across multiple diseases.

<A – David Lucchino>: Jay, I would just add as investors think about the stem cell continuum and how they develop. Our small molecule approach, we believe is able to appropriately work with various needs or disease states and within that continuum and create an aggravation that produces a healing response. And that's sort of a little oversimplified, but that's essentially what we're doing. We're really going to in a smart way, hotwiring this development continuum that stem cells do within the body and using that to harness a healing response. And we're now seeing that in MS with some pretty, I think, compelling initial data.

<Q – Jay Olson>: Excellent. That's super helpful. And is there anything that you think investors are missing or is misunderstood by investors?

<A – David Lucchino>: Well, I think that, listen, coming out of our FX-322-202 study, we learned a tremendous amount from that study, again, I would say, it was we have full confidence in FX-322 as a drug. There were some important learnings that we realized from a design study. I think this company is only getting stronger. I think for the last six months, we've kept our head down. We've been – we have the responsibility to our shareholders to really understand everything we could out of the FX-322-202 study, then apply it along with the other 175 data points that we had.

And I think investors are going to be pleased between now and the end of the year as we share continued evolution and growth of this company. I mean, you're now talking about a company that's moving in to having two credible assets in this area of progenitor cell activation, one in a

substantial clinical stage and one for MS that is coming on, I think at a meaningful pace. Carl, would you add anything to what you think investors might be missing with our story.

<A – Carl LeBel>: But with respect to the hearing program that the FX-322 just keeps delivering. So within one trial now we've learned, as we've talked about that we have subjects that are responding at different rates. So we're going to adjust for that in all of our subsequent trials and continue to monitor all of the patients on our trials, so that we can better understand what that response looks like with the goal of really refining the patient populations that are at one would predict, would respond to treatment. That's the whole goal of moving this thing forward.

<A – David Lucchino>: And Chris, on the MS side, anything that you would want to add?

<A – Chris Loose>: I think it'll be the first opportunity in R&D Day to really start to put forward the data on what progenitor cell activation can achieve and disease modifying benefits. So very much look forward to that discussion.

<A – David Lucchino>: Jay, I guess the other thing I would add is, this team has done an outstanding job. We continue to have a stable high functioning group here of about 80 full-time employees. My management team is highly effective and responsive and works closely not just with me, but with each other. What we're doing is trying to solve riddles, biological riddles that we can then apply in a way that to show clinical benefit. And I think investors need to understand that the way, I'm going to lead this company is isn't a steady methodical way to build long-term shareholder value. And I think that's what we're on the precipice of showing with R&D Day.

<<Jay Olson, Analyst, Oppenheimer & Co. Inc.>>

Excellent. That's super helpful. I think we'll wrap things up there and I want to congratulate you all again on the new data this morning. These are super exciting new findings, and really looking forward to hearing more on your R&D Day, November 9. And thank you so much, David, Carl, Chris for joining us here today, it's been a real pleasure catching up with you and we look forward to staying in touch.

<<David Lucchino, Co-Founder, President and Chief Executive Officer>>

Thank you, Jay. Great to be here. We'll see you soon.

<<Jay Olson, Analyst, Oppenheimer & Co. Inc.>>

See you soon, Dave. Thank you.