UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): July 6, 2021

UNITY BIOTECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation) 001-38470 (Commission File Number) 26-4726035 (IRS Employer Identification Number)

285 East Grand Ave. South San Francisco, CA 94080 (Address of principal executive offices, including Zip Code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the

Registrant's telephone number, including area code: (650) 416-1192

following provisions:				
	Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)			
	Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)			
	Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))			
	Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))			
Securities registered pursuant to Section 12(b) of the Act:				

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	UBX	The Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ⊠

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. \Box

Item 8.01 Other Events.

On July 6, 2021, UNITY Biotechnology, Inc. ("UNITY" or the "Company") announced positive data from its Phase 1 safety study of UBX1325 in patients with advanced disease from diabetic macular edema (DME) or wet or neovascular age-related macular degeneration (AMD) for whom anti-VEGF therapy was no longer considered beneficial. A copy of the press release is being furnished as Exhibit 99.1 to this Current Report on Form 8-K.

On July 6, 2021, the Company also posted a presentation on data from its Phase 1 safety study of UBX1325 in patients with advanced disease from DME or AMD for its investor call on its website. A copy of the presentation is filed as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated by reference herein.

Item 9.01 Financial Statements and Exhibits.

Reference is made to the Exhibit Index attached hereto.

Forward-Looking Statements

Any statements contained in this Form 8-K regarding matters that are not historical facts are "forward looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to, statements regarding: UNITY's understanding of cellular senescence and the role it plays in diseases of aging, the potential for UNITY to develop therapeutics to slow, halt, or reverse diseases of aging, including for ophthalmologic and neurologic diseases, the Company's expectations regarding potential benefits, activity, effectiveness, and safety of its drug candidates, including UBX1325, the potential for UNITY to successfully commence and complete clinical studies, including those of UBX1325 for DME, AMD, and other ophthalmologic diseases, and the expected timing of results of studies including the Phase 2a study of UBX1325. These statements involve substantial known and unknown risks, uncertainties, and other factors that may cause the Company's actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied by these forward-looking statements, including the risk that the COVID-19 worldwide pandemic may continue to negatively impact the development of preclinical and clinical drug candidates, including delaying or disrupting the enrollment of patients in clinical trials, risks relating to the uncertainties inherent in the drug development process, and risks relating to UNITY's understanding of senescence biology. The Company may not actually achieve the plans, intentions, or expectations disclosed in its forward-looking statements, and no undue reliance on the Company's forward-looking statements should be placed. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements the Company makes. The forward-looking statements in this Form 8-K represent the Company's views as of the date of this release. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of UNITY in general, see UNITY's most recent Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, filed with the Securities and Exchange Commission on May 11, 2021, as well as other documents that may be filed by UNITY from time to time with the Securities and Exchange Commission. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this Form 8-K. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made except as required by applicable law.

EXHIBIT INDEX

Exhibit No.	Description			
99.1	Press release titled "UNITY Biotechnology Announces Positive Data from Phase 1 Clinical Trial of UBX1325 in Patients with Advanced Vascular Eye Disease"			
99.2	Presentation of UNITY Biotechnology, Inc. dated July 6, 2021			
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)			

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

UNITY BIOTECHNOLOGY, INC.

Date: July 6, 2021 By: /s/ Anirvan Ghosh

Anirvan Ghosh, Ph.D. Chief Executive Officer

UNITY Biotechnology Announces Positive Data from Phase 1 Clinical Trial of UBX1325 in Patients with Advanced Vascular Eye Disease

Improvement in Visual Acuity and Central Subfield Thickness observed in diabetic macular edema (DME) and wet age-related macular degeneration (wet AMD) patients treated with UBX1325

UBX1325 advances to *Phase 2a study in DME patients as a potential alternative to anti-VEGF therapies*

UNITY to host conference call today at 8:00 a.m. ET

SOUTH SAN FRANCISCO, Calif., July 6, 2021 — UNITY Biotechnology, Inc. ("UNITY") [NASDAQ: UBX], a biotechnology company developing therapeutics to slow, halt, or reverse diseases of aging, today announced positive data from its Phase 1 safety study of UBX1325 in patients with advanced disease from DME or wet AMD for whom anti-VEGF therapy was no longer considered beneficial. UBX1325, a small molecule inhibitor of Bcl-xL and the first senolytic therapeutic evaluated in an ophthalmological clinical study, was well-tolerated with no treatment-related adverse events or dose-limiting toxicities. Additionally, the majority of DME and wet AMD patients treated with a single injection of UBX1325 demonstrated rapid improvements in best-corrected visual acuity (BCVA), central subfield thickness (CST), and sub- and intra-retinal fluid (SRF, IRF), all key clinical measures of disease progression.

The first patient has been dosed in a Phase 2a clinical study to assess the safety and efficacy of UBX1325 in a broader population of patients with DME, and data is expected in the first half of 2022. In addition, UNITY is enrolling additional patients with advanced wet AMD in the Phase 1 study to gather additional data to support a Phase 2a study in wet AMD. These studies are expected to generate data to inform the efficacy of UBX1325 in a wider range of patient populations, including those who are refractory to anti-VEGF treatment.

"We are very excited by the initial efficacy we see with UBX1325, including improvements in vision and structure in advanced patients, which suggest that UBX1325 may benefit a wide range of patients suffering from DME or wet AMD," said Anirvan Ghosh, Ph.D., chief executive officer of UNITY. "UBX1325 targets an entirely novel mechanism to eliminate senescent cells in the retinal and choroidal vasculature, a potential root cause of disease progression, and could provide a valuable alternative or adjunctive treatment option to anti-VEGF therapies. We look forward to several important data readouts in the coming year that will further inform the optimal treatment regimen for UBX1325 in patients with DME and wet AMD."

"The imaging data demonstrating structural improvements in the retina are compelling at this stage of clinical development and represent defined endpoints for disease improvement," said Jeffrey Heier, M.D., Director of the Vitreoretinal Service and Retina Research at Ophthalmic Consultants of Boston. "Importantly, UBX1325 is an entirely new treatment modality for eye

disease and is particularly exciting for this patient population for whom new therapeutic options could provide significant additional benefits alone or in combination with anti-VEGF agents."

The Phase 1, first-in-human, open-label, single-ascending dose study included 12 patients with advanced DME or wet AMD who were no longer expected to benefit from anti-VEGF therapies. UBX1325 was well tolerated in this patient population and demonstrated a favorable acute safety profile supporting further clinical development. There were no dose-limiting toxicities observed, with two nonserious, nondrug-related adverse events reported. In addition, patients treated with UBX1325 had improvements in vision and retinal structure as summarized below.

Treatment of patients with UBX1325 resulted in the following clinical changes as of June 30, 2021:

Gain in ETDRS Letters from Baseline in Best-Corrected Visual Acuity (BCVA)

- Overall (across all doses): 10 of 12 patients showed a gain in ETDRS letters from baseline in BCVA at 2 weeks; 9 of 12 patients showed a gain at 4 weeks
- In high dose groups (5, 10 mcg): 6 of 6 patients showed a gain in ETDRS letters from baseline in BCVA at 2 weeks; 5 of 6 patients showed a gain at 4 weeks

Decrease in Central Subfield Thickness (CST)

- Overall (across all doses): 6 of 12 patients had a decrease (improvement) in CST at 2 weeks; 5 of 12 patients showed reductions at 4 weeks
- In high dose groups (5, 10 mcg): 4 of 6 patients showed decrease in CST at 2 weeks; 3 of 6 patients showed reductions at 4 weeks

Reduction in Subretinal / Intraretinal Fluid

• 3 of 4 patients with wet AMD had a reduction in subretinal / intraretinal fluid (SRF / IRF), and improvement in disease-relevant pathology

Jamie Dananberg, M.D., chief medical officer of UNITY, added, "The patients enrolled in this study had advanced disease for whom anti-VEGF therapies, the standard of care for DME and wet AMD, were no longer thought to be of benefit. Seeing treatment-related improvement in these difficult-to-treat patients is very promising and supports the investigation of UBX1325's potential as a differentiated, disease-modifying treatment option for a broad patient population. We look forward to further exploring the efficacy of this novel mechanism to alter the course of disease progression in DME patients in the recently initiated Phase 2a study."

Conference Call Information

UNITY will host a conference call and webcast for investors on Tuesday, July 6th at 8:00 a.m. ET to discuss the UBX1325 clinical data. The live webcast can be accessed in the "Investors and Media" section of our website, www.unitybiotechnology.com, under "Events & Presentations" or by clicking here. You may also listen to the call by dialing (877) 235-8637 within the U.S. or (704) 815-6400 outside the U.S. and providing conference ID 9423419. A replay will be available two hours after the completion of the call and can be accessed in the "Investors & Media" section of our website, under "Events and Presentations."

About UBX1325

UBX1325 is an investigational compound being studied for age-related diseases of the eye, including diabetic macular edema (DME), age-related macular degeneration (AMD), and diabetic retinopathy that is not approved for any use in any country. UBX1325 is a potent small molecule inhibitor of Bcl-xL, a member of the Bcl-2 family of apoptosis regulating proteins. UBX1325 is designed to inhibit the function of proteins that senescent cells rely on for survival. In preclinical studies, UNITY has demonstrated that targeting Bcl-xL with UBX1325 preferentially eliminated senescent cells from diseased tissue while sparing cells in healthy tissue. UNITY's goal with UBX1325 is to transformationally improve real-world outcomes for patients with DR, DME, and AMD.

About UNITY

UNITY is developing a new class of therapeutics to slow, halt, or reverse diseases of aging. UNITY's current focus is on creating medicines to selectively eliminate or modulate senescent cells and thereby provide transformative benefit in agerelated ophthalmologic and neurologic diseases. More information is available at www.unitybiotechnology.com or follow us on Twitter and LinkedIn.

Forward-Looking Statements

This press release contains forward-looking statements including statements related to UNITY's understanding of cellular senescence and the role it plays in diseases of aging, the potential for UNITY to develop therapeutics to slow, halt, or reverse diseases of aging, including for ophthalmologic and neurologic diseases, our expectations regarding potential benefits, activity, effectiveness, and safety of UBX1325, the potential for UNITY to successfully commence and complete clinical studies of UBX1325 for DME, AMD, and other ophthalmologic diseases, the expected timing of results of our studies of UBX1325, the timing of the expected commencement, progression, and conclusion of our studies including those of UBX1325, and UNITY's expectations regarding the sufficiency of its cash runway. These statements involve substantial known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied by these forward-looking statements, including the risk that the COVID-19 worldwide pandemic may continue to negatively impact the development of preclinical and clinical drug candidates, including delaying or disrupting the enrollment of patients in clinical trials, risks relating to the uncertainties inherent in the drug development process, and risks relating to UNITY's understanding of senescence biology. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forwardlooking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. The forward-looking statements in this press release represent our views as of the date of this release. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this release. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of UNITY in general, see UNITY's most recent Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, filed with

the Securities and Exchange Commission on May 11, 2021, as well as other documents that may be filed by UNITY from time to time with the Securities and Exchange Commission.

Media

Canale Communications
Jason Spark
jason.spark@canalecomm.com





UBX1325 Phase 1 Data Conference Call

Anirvan Ghosh, CEO Jamie Dananberg, CMO Lynne Sullivan, CFO

July 6th, 2021



SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This presentation and the accompanying oral commentary contain forward-looking statements including statements related to UNITY's understanding of cellular senescence and the role it plays in diseases of aging, the potential for UNITY's develop therapeutics to slow, halt, or reverse diseases of aging, including for ophthalmologic and neurologic diseases, our expectations regarding potential benefits, activity, effectiveness, and safety of UBX1325, the potential for UNITY's osuccessfully commence and complete clinical studies of UBX1325 for DME, AMD, and other ophthalmologic diseases, the expected timing of results of our studies of UBX1325, the timing of the expected commencement, progression, and conclusion of our studies including those of UBX1325, and UNITY's expectations regarding the sufficiency of its cash runway. These statements involve substantial known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied by these forward-looking statements, including the risk that the COVID-19 worldwide pandemic may continue to negatively impact the development of preclinical and clinical drug candidates, including delaying or disrupting the enrollment of patients in clinical trials, risks relating to the uncertainties inherent in the drug development process, and risks relating to UNITY's understanding of senescence biology. We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not

UNITY

UBX1325 PROVIDES AN OPPORTUNITY FOR A TRANSFORMATIVE, DISEASE-MODIFYING THERAPY FOR DME AND nAMD PATIENTS

4 Weeks

"The imaging data demonstrating structural improvements in the retina are compelling at this stage of clinical development and represent defined endpoints for disease improvement..."

Week 4

Jeffrey Heier, M.D.

Baseline

Director of the Vitreoretinal Service and Retina Research, Ophthalmic Consultants of Boston

UNITY

UBX1325 PROVIDES AN OPPORTUNITY FOR A TRANSFORMATIVE, DISEASE-MODIFYING THERAPY FOR DME AND nAMD PATIENTS

Phase 1 Data Highlights

- UBX1325, the first senolytic drug being explored in eye disease, had a favorable safety and tolerability profile
- Initial efficacy data show rapid improvements in vision and retinal structure in DME and nAMD patients after a single dose

Implications for Addressing Unmet Need

- Could provide disease-modification by reversing pathophysiology and restoring tissue health
- Novel mechanism of action could benefit both treatment-naïve patients as well as poor anti-VEGF responders

Built on UNITY's Senescent Cell Biology Platform

- Data support senolytic therapeutic hypothesis
- · Mechanism has broad implication for diseases of aging

UNITY

d.

UNITY IS DEVELOPING TRANSFORMATIVE MEDICINES TO SLOW, HALT, OR REVERSE DISEASES OF AGING



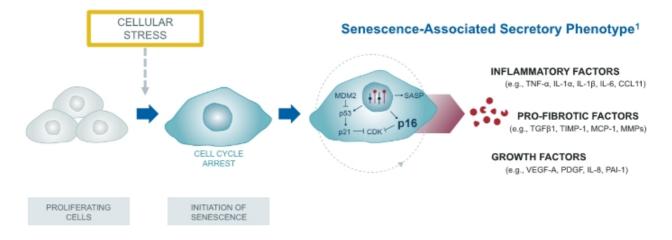




NEUROLOGY: Alzheimer's, FTD, PSP (and other Tauopathies), ALS, Cognitive Disorders

UNITY

SENESCENT CELLS AFFECT THE TISSUE MICRO-ENVIRONMENT TO DRIVE DISEASE PROGRESSION

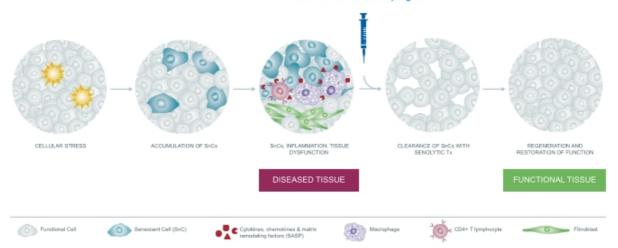


¹Coppe et al. Annu Rev Pathol 2010;5:99-118.



UNITY IS DEVELOPING SENOLYTIC MEDICINES TO ELIMINATE SENESCENT CELLS TO RESTORE TISSUE HEALTH

Target Senescent Cells and neutralize SASP factors to eliminate root cause of disease progression



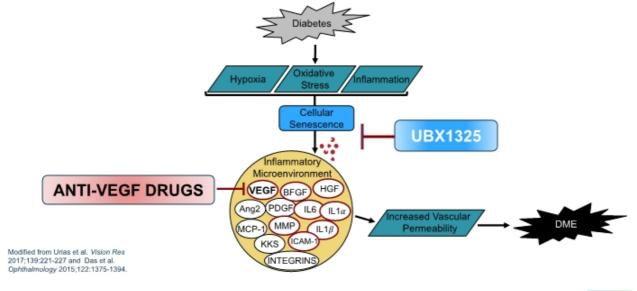
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THERAPEUTIC HYPOTHESIS: ELIMINATION OF VASCULAR SENESCENT CELLS BY UBX1325 SHOULD RE-ESTABLISH BARRIER FUNCTION AND REVERSE DISEASE PROGRESSION IN DME AND NAMD PATIENTS



UNITY

UBX1325 TARGETS A NODE UPSTREAM OF ANTI-VEGF THERAPIES



UNITY

UBX1325 PROVIDES AN OPPORTUNITY FOR A TRANSFORMATIVE BEST-IN-DISEASE THERAPY

UBX1325

Aspirational Treatment Benefits for DME and nAMD Patients

- Rapid effect with greater efficacy and durability than SoC
- **✓** Novel MOA and favorable pharmacology
- ✓ Able to use in combination with anti-VEGF agents
- ✓ Potential for improvement of retinal/choroidal blood flow
- ✓ Able to reduce ischemic regions of the retina
- ✓ Potential for disease modification

UNITY



UBX1325 CLINICAL PROGRAM

Single Injection of UBX1325



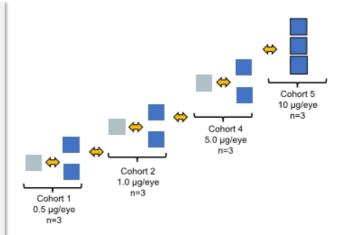
*Study under consideration



STUDY UBX1325-01: SINGLE ASCENDING DOSE SAFETY STUDY IN PATIENTS WITH ADVANCED DME OR nAMD

Study Population

- Advanced DME or nAMD with BCVA of 20/80 (55 ETDRS letters) or worse in the first 2 cohorts; 20/40 (70 ETDRS letters) or worse in later cohorts
- Patients for whom anti-VEGF therapy was no longer considered beneficial
- Patients had received neither an anti-VEGF agent nor a corticosteroid in the 3 months preceding enrollment
- DME patients had ≥350 µm of fluid; nAMD patient had presence of either sub - or intra-retinal fluid



UNITY

EXECUTIVE SUMMARY: UBX1325 PHASE 1 SAD STUDY

Favorable Safety and Tolerability Profile

 In patients with advanced DME and nAMD in the SAD Phase 1 study, UBX1325 was well tolerated with favorable acute safety profile supporting development; no dose-limiting toxicities; a total of two nonserious, nondrug-related AE's were reported

BCVA: Gain in ETDRS Letters from Baseline

- · Overall (all doses): 10 of 12 patients showed a gain at 2 weeks; 9 of 12 patients at 4 weeks
- In higher dose cohorts (5, 10 μg): 6 of 6 patients showed a gain at 2 weeks; 5 of 6 patients at 4 weeks

CST: Decrease from Baseline

- · Overall (all doses): 6 of 12 patients had a decrease at 2 weeks; 5 of 12 patients at 4 weeks
- In higher dose cohorts (5,10 μg): 4 of 6 patients showed a decrease at 2 weeks; 3 of 6 patients at 4 weeks

Reduction in Subretinal / Intraretinal Fluid in nAMD Patients

•KOLs see current data as highly indicative of disease-relevant biologic activity

UNITY

UBX1325 WAS WELL-TOLERATED THROUGH ALL DOSES

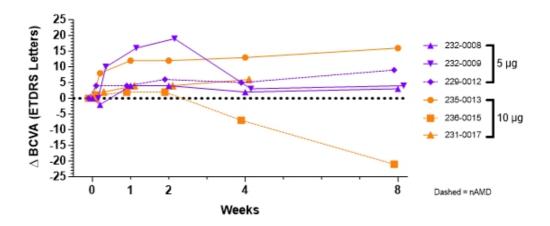
Measure	Assessment
Acute inflammation	None observed
Evidence of ocular infection	None observed
Persistent and clinically relevant increases in intraocular pressure	None observed
Clinically relevant changes in BCVA	2 events in 2 patients*
Retinal changes as determined by color fundus photography	None observed
Adverse structural changes to retina as measured by SD-OCT	None observed
Retinal or vitreal hemorrhage	None observed
Structural changes by slit-lamp exam	None observed
Retinal detachment	None observed
Other clinical or laboratory assessments	None observed
Patient reported symptoms	2 decreased VA in 2 patients*
Dose-limiting toxicity	None observed

Safety and Tolerability acceptable to advance to additional clinical studies with UBX1325 in ocular diseases

* Same patients, not treatment-related

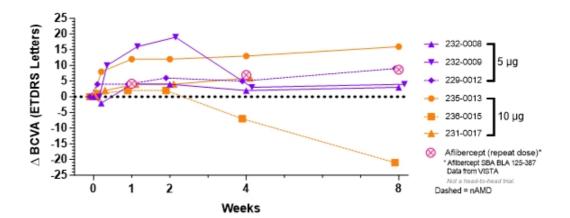


BY 4 WEEKS, PATIENTS SHOW RAPID INCREASE IN BCVA AMONGST HIGH DOSE COHORTS AFTER SINGLE DOSE UBX1325



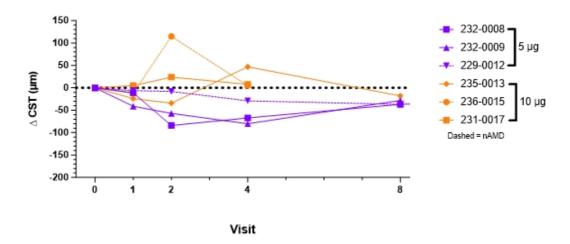
UNITY

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UNITY

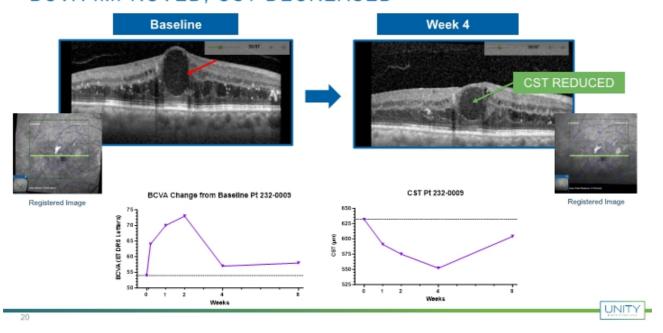
BY 4 WEEKS, MAJORITY OF PATIENTS SHOW DECREASE IN CST AMONGST HIGH DOSE COHORTS AFTER SINGLE DOSE UBX1325



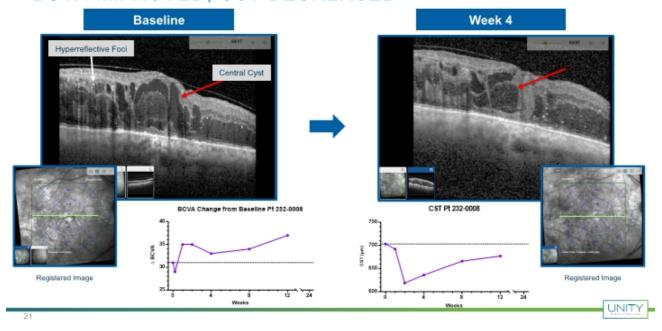
UNITY



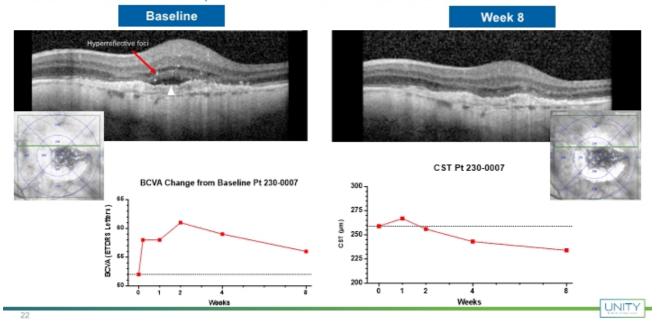
DME PATIENT 232-0009, 5 μg BCVA IMPROVED, CST DECREASED



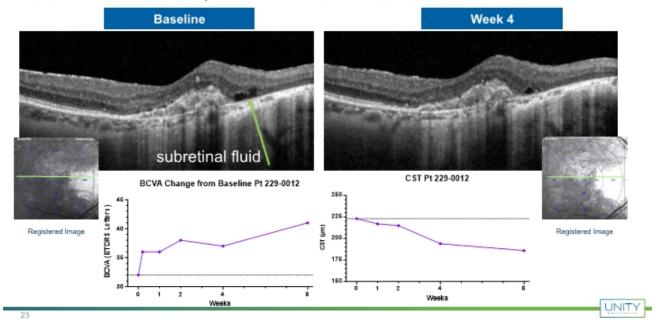
DME PATIENT 232-0008, 5 µg BCVA IMPROVED, CST DECREASED



nAMD PATIENT 230-0007: 1 μg BCVA IMPROVED, CST AND SRF REDUCED



nAMD PATIENT 229-0012: 5 μg BCVA IMPROVED, CST AND SRF REDUCED



EXECUTIVE SUMMARY: UBX1325 PHASE 1 SAD STUDY

Favorable Safety and Tolerability Profile

 In patients with advanced DME and nAMD in the SAD Phase 1 study, UBX1325 was well tolerated with favorable acute safety profile supporting development; no dose-limiting toxicities; a total of two nonserious, nondrug-related AE's were reported

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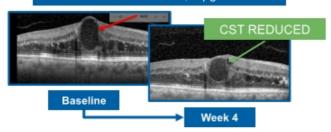
Reduction in Subretinal / Intraretinal Fluid in nAMD Patients

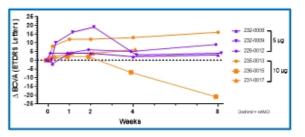
•KOLs see current data as highly indicative of disease-relevant biologic activity

UNITY

UBX1325 PROVIDES AN OPPORTUNITY FOR A TRANSFORMATIVE, DISEASE-MODIFYING THERAPY FOR DME AND nAMD PATIENTS

PATIENT 232-0009 DME, 5 µg UBX1325





"The imaging data demonstrating structural improvements in the retina are compelling at this stage of clinical development and represent defined endpoints for disease improvement..."

Jeffrey Heier, M.D.

Director of the Vitreoretinal Service and Retina Research, Ophthalmic Consultants of Boston

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