PHASE 2 DATA PRESENTATION

August 17th, 2020
This presentation and the accompanying oral commentary contain forward-looking statements, including: the expected timing of date from the 24 week endpoints from Unity’s Phase 2 clinical study and Phase 1b high-dose, repeat-dose clinical study of UBX0101, statements regarding UNITY’s understanding of cellular senescence and the role it plays in osteoarthritis and retinal diseases, the potential for UNITY to develop therapeutics to extend healthspan, including UBX1325 for retinal disease, expectations regarding the results of UNITY’s clinical studies 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. 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 forward-looking 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 presentation represent our views as of the date of this presentation. 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 presentation.

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 the Company in general, see UNITY’s most recently filed Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, filed with the Securities and Exchange Commission on July 31, 2020, as well as other documents that may be filed by UNITY from time to time with the Securities and Exchange Commission.

This presentation concerns drug candidates that are under clinical investigation and which have not yet been approved for marketing by the U.S. Food and Drug Administration. They are currently limited by Federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are being investigated.
# TODAY’S CALL AGENDA

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<th>Introduction</th>
<th>Lynne Sullivan, Chief Financial Officer</th>
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<td>Anirvan Ghosh, Ph.D., Chief Executive Officer</td>
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<td>UBX0101 Ph 2 Program Overview and Efficacy and Safety Data</td>
<td>Jamie Dananberg, M.D., Chief Medical Officer</td>
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<td>UNITY Path Forward and Pipeline Evolution</td>
<td>Anirvan Ghosh, Ph.D., Chief Executive Officer</td>
</tr>
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| Financial Metrics, Milestones, and Q&A                                     | Anirvan Ghosh, Ph.D., Chief Executive Officer  
                                        Jamie Dananberg, M.D., Chief Medical Officer  
                                        Lynne Sullivan, Chief Financial Officer |
UNITY OVERVIEW AND THERAPEUTIC HYPOTHESIS

Anirvan Ghosh, CEO
UNITY AIMS TO DEVELOP SENOLYTIC MEDICINES TO SLOW, HALT, OR REVERSE DISEASES OF AGING

**Therapeutic Potential of Senolytic Medicines**

**NEUROLOGY:**
Alzheimer’s, Vascular dementia, Parkinson’s

**OPHTHALMOLOGY:**
AMD, Diabetic Retinopathy, DME

**PULMONARY DISEASE:**
IPF, COPD, PAH

**MUSCULOSKELETAL DISEASES:**
Osteoarthritis (knee, hip, hand, neck), immunologic diseases of joints
Senescence-Associated Secretory Phenotype

Inflammatory Factors (e.g., MMP1, TNF-α, IL-1β,)

Pro-fibrotic Factors (e.g., TGFβ1, TIMP-1, MCP-1)

Growth Factors (e.g., VEGF-A, IL-6, PAI-1)

THERAPEUTIC RATIONALE FOR SENOLYTIC MEDICINES

SENOLYTIC Tx TRIGGERS SENESCENT CELL (SnC) ELIMINATION

CELLULAR STRESS → ACCUMULATION OF SnCs → SnCs, INFLAMMATION, TISSUE DYSFUNCTION → CLEARANCE OF SnCs WITH SENOLYTIC Tx → REGENERATION AND RESTORATION OF FUNCTION

DISEASED TISSUE → FUNCTIONAL TISSUE

Functional Cell, Senescent Cell (SnC), Cytokines, chemokines & matrix remodeling factors (SASP), Macrophage, CD4+ T lymphocyte, Fibroblast
UBX0101
TOP LINE RESULTS
in OSTEOARTHRITIS

Jamie Dananberg, CMO
UBX0101 CLINICAL PROGRAM

SAFETY & TOLERABILITY

DOSE & DURABILITY

Phase 1*
SAD Study

Phase 1*
Biomarker Sub-Study

Ph 2 Study
Single IA (.5mg, 2mg, 4mg)

Ph 1b Study
High & Repeat Dose (8mg, 4mg x 2)

Long-Term Follow-up

2018 2019 2020 2021+

*Completed Study
Phase 2 study evaluating a single intra-articular injection of UBX0101 over three different doses
SUMMARY

• We did not see separation of UBX0101 treatment groups from placebo at 12 weeks

• A thorough analysis of covariates and their ability to confound the results was completed and did not identify any that affected the conclusions from the study

• In addition we observed a placebo response in the Phase 2 study that was both large in magnitude and long in duration that further hampered the opportunity to detect a UBX0101 treatment effect

• UBX0101 was safe and well tolerated through the Week 12 timepoint; there were no study-treatment related SAE’s during the conduct of the study and one patient ended participation due to a treatment-emergent AE

• We do not intend to advance UBX0101 to a pivotal study
## PATIENT DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Demographic</th>
<th>MUS-201 Trial Population</th>
<th>Cohorts Balanced*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Subjects (N=183)</td>
<td></td>
</tr>
<tr>
<td>Age (yrs) ;Mean (SD)</td>
<td>62.9 (8.99)</td>
<td>YES</td>
</tr>
<tr>
<td>Gender (M:F)</td>
<td>(66:117)</td>
<td>YES</td>
</tr>
<tr>
<td>Race (%)</td>
<td>1 / 38 / 143 / 1</td>
<td>YES</td>
</tr>
<tr>
<td>(Asian/Black/White/Other)</td>
<td></td>
<td></td>
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<tr>
<td>Ethnicity (%)</td>
<td>28 / 155</td>
<td>NO* (p&lt;0.10)</td>
</tr>
<tr>
<td>(Hispanic/Non-Hispanic/Unknown)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (kg) ;Mean (SD)</td>
<td>84.7 (16.27)</td>
<td>YES</td>
</tr>
<tr>
<td>Height (cm) ;Mean (SD)</td>
<td>168.3 (9.77)</td>
<td>YES</td>
</tr>
<tr>
<td>BMI (kg/m^2) ;Mean (SD)</td>
<td>29.8 (4.66)</td>
<td>YES</td>
</tr>
</tbody>
</table>

* Determined by Fisher’s Exact Test for categorical variables and ANOVA for continuous variables

Source: Table 14.1.1I: Summary of Subject Disposition from Baseline to Week 12; Intent-to-Treat Population
### MUS-201 Baseline Characteristics by Treatment Assignment

<table>
<thead>
<tr>
<th>Baseline Characteristics</th>
<th>Placebo (N=46)</th>
<th>0.5 (N=45)</th>
<th>2.0 (N=46)</th>
<th>4.0 (N=46)</th>
<th>Overall (N=183)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dose Group (n)</strong></td>
<td></td>
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<tr>
<td>Dose Group (n)</td>
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<tr>
<td>Placebo (N=46)</td>
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<tr>
<td>0.5 (N=45)</td>
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<tr>
<td>2.0 (N=46)</td>
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<tr>
<td>4.0 (N=46)</td>
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<tr>
<td><strong>Mean (SD)</strong></td>
<td></td>
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</tr>
<tr>
<td>Time Since Dx of OA (yrs)</td>
<td>12.9 (10.90)</td>
<td>9.9 (9.45)</td>
<td>9.8 (8.84)</td>
<td>8.9 (6.99)</td>
<td>10.4 (9.20)</td>
</tr>
<tr>
<td>BL WOMAC A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain (0-4 Item Score Average)</td>
<td>2.20 (0.577)</td>
<td>2.05 (0.509)</td>
<td>2.08 (0.658)</td>
<td>2.11 (0.647)</td>
<td>2.11 (0.599)</td>
</tr>
<tr>
<td>BL Weekly Average NRS (0-10)</td>
<td>6.66 (1.382)</td>
<td>6.48 (1.167)</td>
<td>6.56 (1.463)</td>
<td>6.68 (1.542)</td>
<td>6.60 (1.387)</td>
</tr>
<tr>
<td>BL WOMAC C</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Function (0-4 Item Score Average)</td>
<td>2.26 (0.546)</td>
<td>2.17 (0.527)</td>
<td>2.16 (0.541)</td>
<td>2.22 (0.660)</td>
<td>2.20 (0.568)</td>
</tr>
<tr>
<td>Kellgren-Lawrence Grade, n (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6 (13.0)</td>
<td>6 (13.3)</td>
<td>11 (23.9)</td>
<td>4 (8.7)</td>
<td>27 (14.8)</td>
</tr>
<tr>
<td>2</td>
<td>13 (28.3)</td>
<td>5 (11.1)</td>
<td>11 (23.9)</td>
<td>9 (19.6)</td>
<td>38 (20.8)</td>
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<tr>
<td>3</td>
<td>21 (45.7)</td>
<td>24 (53.3)</td>
<td>15 (32.6)</td>
<td>23 (50.0)</td>
<td>83 (45.4)</td>
</tr>
<tr>
<td>4</td>
<td>6 (13.0)</td>
<td>10 (22.2)</td>
<td>9 (19.6)</td>
<td>10 (21.7)</td>
<td>35 (19.1)</td>
</tr>
</tbody>
</table>
PRIMARY ENDPOINT: WOMAC-A – CFBL AT 12 WEEKS

Figure 14.2.1.2.11: Box Plots of Change from Baseline of WOMAC-A Score up to Week 12 Modified Intent-to-Treat Population

Change from Baseline vs. Time (Week)
UBX0101_MUS_201 PLACEBO RESPONSE VS. HISTORICAL REPORTS

Data from J. Mandema, Certara
We would like to thank the UBX0101 team, and the clinicians, patients and caregivers who participated in the UBX0101 Phase 2 Study.
UNITY PATH
FORWARD AND
PIPELINE EVOLUTION

Anirvan Ghosh, CEO
Strong evidence linking senescent cells to diseases of aging

Cellular senescence impairs the reversibility of pulmonary arterial hypertension

Senescence-associated secretory phenotype promotes chronic ocular graft-vs-host disease in mice and humans

Retention disease

Senescence-associated secretory phenotype contributes to pathological angiogenesis in retinopathy

Senescence-associated secretory phenotype
ROLE OF SENESCENCE IN AGE-RELATED EYE DISEASE

SnCs accumulate in the retina, potentially contributing to disease phenotypes

**AMD**
- SnCs accumulate with age in the retina retinal pigment epithelium (RPE) layer
- SASP → choroidal remodeling & RPE dysfunction → atrophy
- Disease → central vision loss

**DR & DME**
- SnCs accumulate in the retina with age & diabetic disease
- SASP → ocular inflammation, abnormal blood vessel growth
- Disease → vision loss

**Secretome**
- SASP FACTORS (VEGF-α, IP-10)
- SASP FACTORS (PAI-1, IL-6, IL-8, VEGF)

**Disease symptoms**

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SENESCENCE BURDEN IN AMD AND DR/DME

- Age-related eye diseases are multifactorial
- SnC burden increases with disease stage
- DR/DME patients show SnC in the retina and Choroid

Unpublished UNITY Data
OUR Bcl-xL INHIBITOR DEMONSTRATES EFFICACY IN MOUSE MODEL OF DIABETIC RETINOPATHY

Streptozotocin (STZ) diabetic retinopathy model

Intravitreal dosing reduces SASP & vascular leakage and protects retinal function in diabetic mice

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Effect on Photoreceptor Function

A-wave amplitude: week 10

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Unpublished UNITY Data

1 μM = ~1.7 ng of UBX1967
SENESCENCE DISEASE HYPOTHESIS IN THE BRAIN

SnCs accumulate in the brain, promote inflammation, and induce neurodegeneration

SnCs accumulate in aged & diseased brain

SASP → inflammation, impaired function, neurodegeneration

Disease → impaired cognitive & motor function, AD, PD, MS, ALS, HTT, CTE & TBI

REFERENCE: Chinta et al., Cellular senescence and the aging brain, Exp Gerontol. 68:3-7 (2015)
Pursuing indications with established endpoints and regulatory pathways

<table>
<thead>
<tr>
<th>MECHANISM</th>
<th>INDICATION</th>
<th>RESEARCH</th>
<th>LEAD OPTIMIZATION</th>
<th>IND-ENABLING</th>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSCULOSKELETAL</td>
<td>p53/MDM2 inhibition</td>
<td>Osteoarthritis</td>
<td></td>
<td>UBX0101</td>
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<td></td>
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<tr>
<td>OPHTHALMOLOGY</td>
<td>Bcl-xL Inhibition</td>
<td>AMD, Diabetic Macular Edema, Diabetic Retinopathy</td>
<td>UBX1325 / UBX1967</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Multiple Mechanisms</td>
<td></td>
<td></td>
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<tr>
<td>NEUROLOGY</td>
<td>Multiple mechanisms</td>
<td>Neurodegenerative, Cognitive disorders</td>
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</tbody>
</table>
FINANCIAL METRICS AND MILESTONES

Lynne Sullivan, CFO
FINANCIAL METRICS AND MILESTONES

- $112 million cash and cash equivalents as of June 30, 2020, excluding Hercules debt facility
- We took down the first tranche of Hercules debt of $25M upon closing in August 2020
- We do not intend to advance UBX0101 into pivotal studies which will extend our cash runway
- We will focus on capital allocation to extend our cash runway well into 2022, thus enabling initial proof-of-concept on UBX1325

MILESTONES

- 2H 2020 – Ph 2 24-week data & Ph 1b 12 and 24-week expected from UBX0101
  - Data to be shared at a scientific meeting (immaterial costs to complete)
- 2H 2020 – anticipate entering the clinic with UBX1325
- To enable multiple indications (e.g., DME, DR, AMD)
- Initial data expected 2021