UNITY
BIOTECHNOLOGY

CORPORATE PRESENTATION

July 2020

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This presentation and the accompanying oral commentary contain forward-looking statements, including: statements related to our understanding of cellular senescence and the role cellular senescence plays in diseases of aging; our ability to develop medicines that eliminate senescent cells; our expectations regarding the potential benefits, activity, effectiveness and safety of senolytic drug candidates; the status of our preclinical and clinical pipeline; the potential benefits, activity, effectiveness and safety of UBX0101 in patients with osteoarthritis ("OA") of the knee; the design of, pace of enrollment in, and timing of data readout from our Phase 2 OA study; the design of and timing of data readout from our Phase 1b OA study; the timing of initiation of and data read-out from our first-in-human study of a senolytic molecule in age-related eye diseases; and our expectations with regard to the sufficiency of our 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 March 31, 2020, filed with the Securities and Exchange Commission on May 7, 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.

MANAGEMENT

An experienced team with a track record of success

ANIRVAN GHOSH, PHD
Chief Executive Officer

Biogen · Roche · Johns Hopkins School of Medicine · UC San Diego School of Medicine

NATHANIEL DAVID, PHD
President

KYTHERA BIOPHARMACEUTICALS · ACHAOGEN · syrrx

DAN MARQUESS, D. PHIL
Chief Scientific Officer

Theravance · GlaxoSmithKline

JAMIE DANANBERG, MD
Chief Medical Officer

Lilly · Takeda

BOB GOELTZ, CPA, MBA
Chief Financial Officer

CytomX Therapeutics · Onyx Pharmaceuticals · Amgen · Tularik

TAMMY TOMPKINS, JD
General Counsel

khosla ventures · Amyris

SUSIE LUNDEEN
SVP of People

KYTHERA BIOPHARMACEUTICALS · Amgen

PEDRO BELTRAN, PHD
SVP of Biology

Amgen

DOUG RICH, MBA
SVP, Operations

KYTHERA BIOPHARMACEUTICALS · Amgen · Boehringer Ingelheim

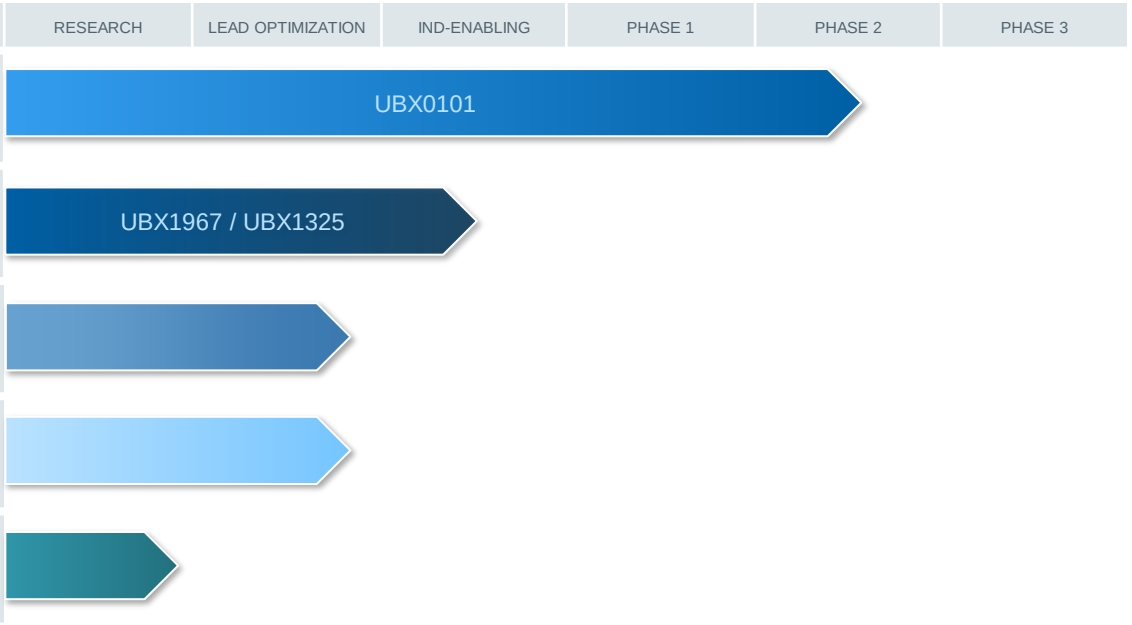
CAMILLE LANDIS, MBA
SVP, Corporate Development

AFFYMAX · Navigant Consulting · PiperJaffray · relypsa

UNITY PIPELINE

Pursuing broad range of diseases with established endpoints and regulatory pathways

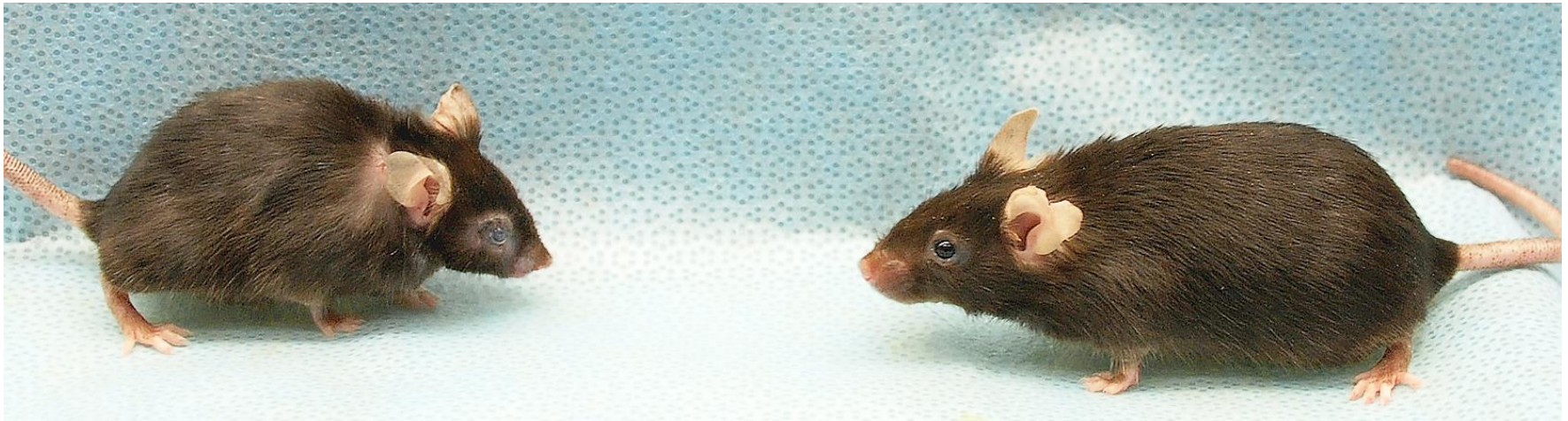
	MECHANISM	INDICATION
MUSCULOSKELETAL	p53/MDM2 inhibition	Osteoarthritis
OPHTHALMOLOGY	BCL2 inhibition	Age-Related Macular Degeneration, Diabetic Macular Edema, Diabetic Retinopathy
PULMONARY	Undisclosed	Idiopathic Pulmonary Fibrosis and other indications
NEUROLOGY	Multiple mechanisms	Neurodegenerative and Cognition
MULTIPLE	Undisclosed	Liver, Kidney



UNITY OPPORTUNITY

LEADER IN CELLULAR SENESCENCE	• Emerging research shows that senescent cells are implicated in **multiple diseases of aging** • Selectively eliminating senescent cells targets a **root cause** of age-related disease • Building on our **deep understanding of senescence biology** and intellectual property, our approach generates potent senolytic drug candidates • Pursuing diseases with **established endpoints and regulatory pathways**
CLINICAL EVIDENCE	• Phase 1 study showed **clear and substantial improvements** in **OA pain and function** • Phase 2 study of UBX0101 enrollment is complete; **Topline 12-week data expected 3Q20; 24-week data expected 2H20** • Phase 1b study for higher dose and repeat doses UBX0101; enrollment is complete; **12 and 24-week data expected in 2H20** • Ophthalmology first-in-human **study start expected in 2H 2020; Data expected in 2021**
EXPERIENCED TEAM	• Seasoned executive team with broad biotech experience • Strong track record of delivering for patients and investors
FINANCIAL POSITION	• Cash equivalents and investments of $109.2 million as of March 31, 2020 • Cash runway into second half of 2021

CLEARING SnCs: SIGNIFICANT IMPACT ON AGING



- Cartilage loss
- Reduced locomotion
- Sarcopenia
- Frailty
- Eye disease
- CNS Dysfunction
- Cardiac Dysfunction
- Cancer
- Kidney Dysfunction
- Loss of subcutaneous fat

SIGNIFICANT EXTENSION OF HEALTHSPAN

(AND UP TO 35% INCREASE IN MEDIAN LIFESPAN)

Jeon et. al. Nature 2017; Bussian et. al. Nature 2018; Baker et. al. Nature 2011; Childs et. al. Science 2016; Childs et. al. Nature 2017; Oubaha et. al. Sci. Transl. Med. 2016; Change et. al. Nature 2015; Coppe et. al. PLos Biology 2008; Baker et. al. Nature 2016; Baker et. al. Nature 2015

FROM SCIENTIFIC INSIGHT TO THERAPEUTIC BENEFIT

nature
International weekly journal of science

Letter | Published: 02 November 2011

Clearance of p16^{Ink4a}-positive senescent cells delays ageing-associated disorders

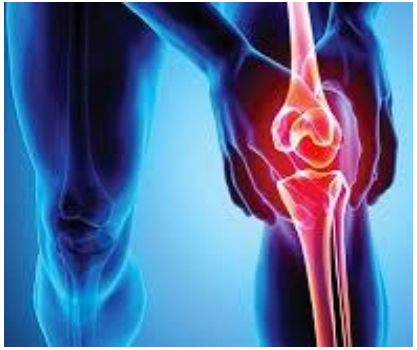
Darren J. Baker, Tobias Wijshake, Tamar Tchkonia, Nathan K. LeBrasseur, Bennett G. Childs, Bart van de Sluis, James L. Kirkland & Jan M. van Deursen

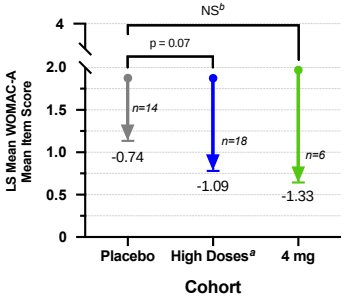
MAYO CLINIC

BUCK INSTITUTE FOR RESEARCH ON AGING

UNITY BIOTECHNOLOGY

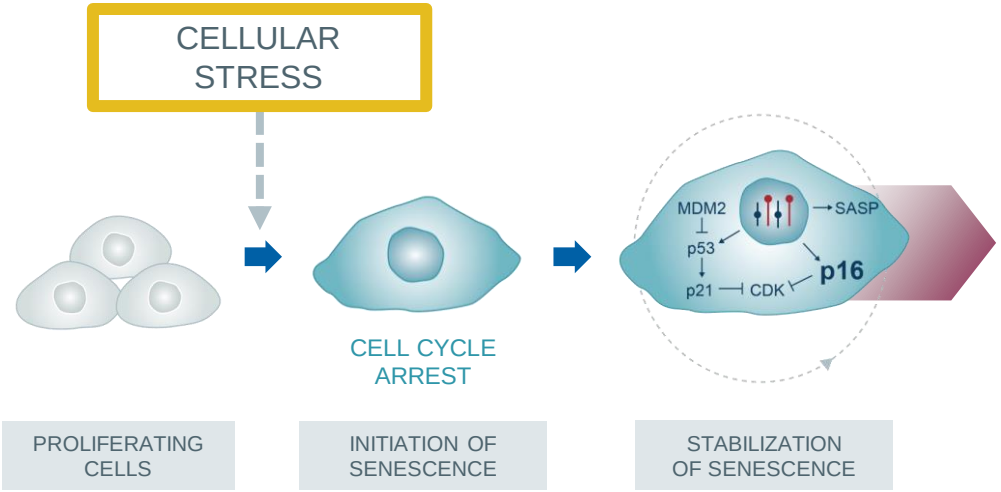
Phase 1 clinical study in osteoarthritis showed improvements in pain and function





2011 → **2019**

SENESCENT CELLS ARE IMPLICATED IN MULTIPLE DISEASES OF AGING



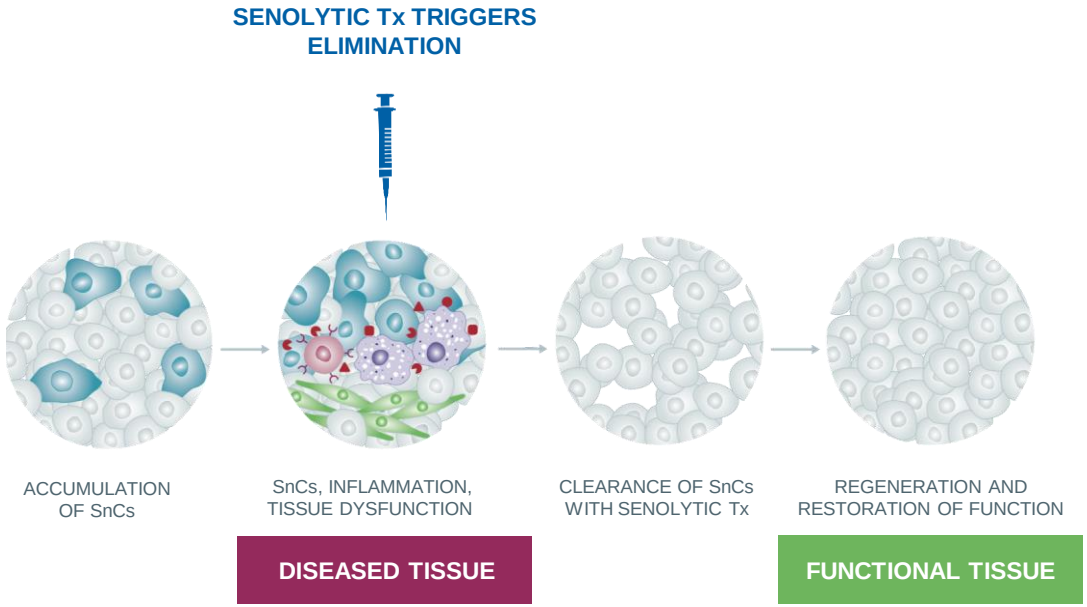
SASP

SASP FACTORS	DISEASES
INFLAMMATORY FACTORS (MMP1, MMP3, TNF-α, IL-1β, prostaglandins)	**INFLAMMATORY DISEASES** Osteoarthritis
PRO-FIBROTIC FACTORS (TGFβ1, TGFβ2, CTGF, TIMP-1, MCP-1)	**FIBROTIC DISEASES** Idiopathic Pulmonary Fibrosis, Chronic Kidney Disease, Polycystic Kidney Disease, Primary Sclerosing Cholangitis, Primary Biliary Cholangitis, NASH
GROWTH FACTORS (VEGF-α, IL-6, IL-8, Pai-1)	**VASCULAR DISEASES** AMD, Diabetic Retinopathy

Senescent cells represent a potential ***root cause*** of diseases of aging

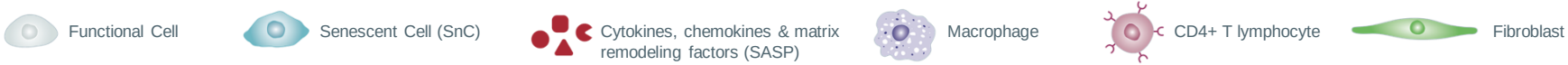
SASP = senescence-associated secretory phenotype

THE UNITY THERAPEUTIC APPROACH



POTENTIAL CLINICAL ADVANTAGES

- Improved magnitude of effect by eliminating source of multiple factors
- Longer duration of therapeutic benefit
- Reduced frequency of dosing
- Local administration
- Disease modification



SASP = senescence-associated secretory phenotype

OSTEOARTHRITIS

(MUSCULOSKELETAL INDICATION)

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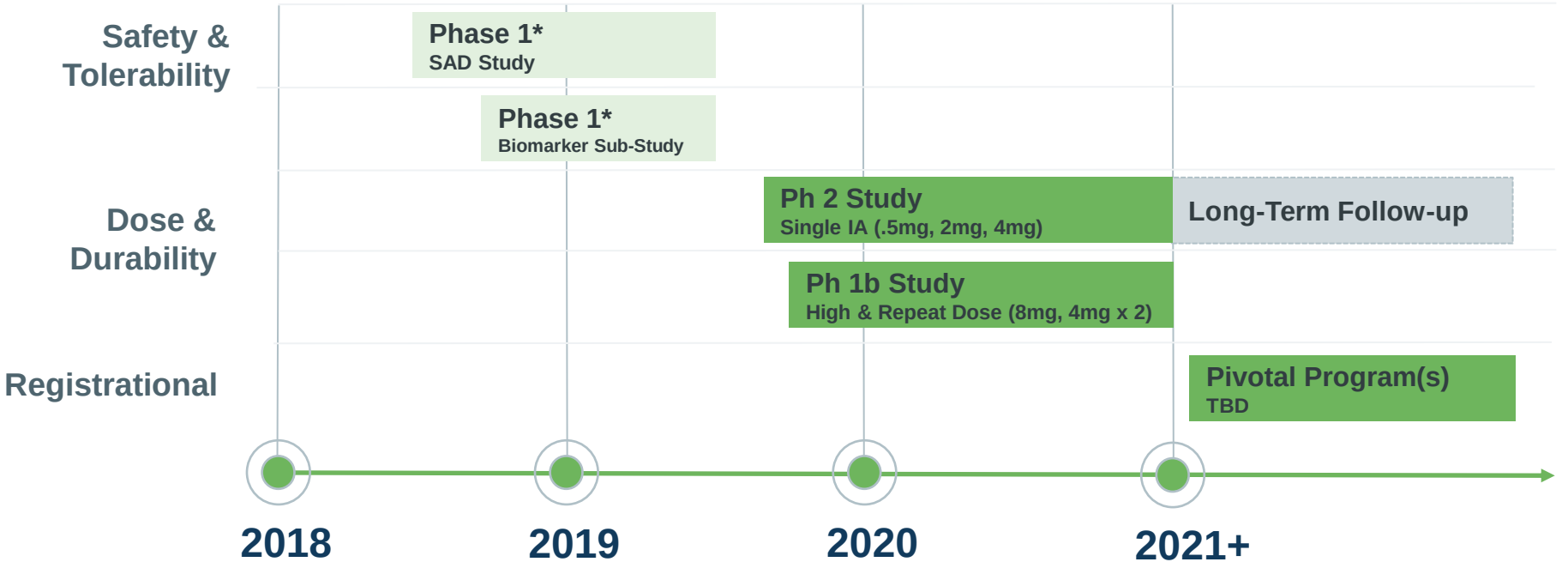
UBX0101 CLINICAL PROGRAM

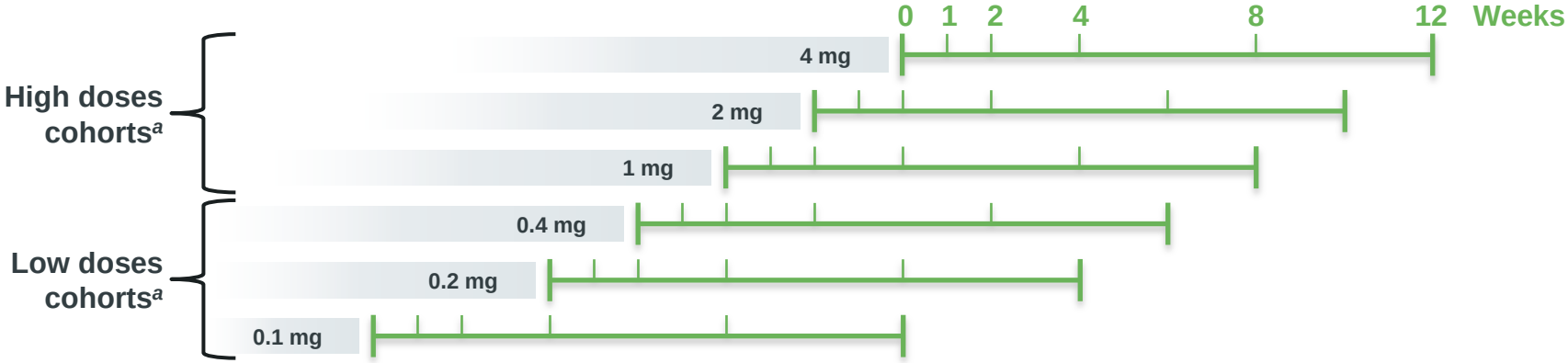


Evidence generation ahead of pivotal program(s)

*Completed Study

UBX0101 PHASE 1 SINGLE ASCENDING DOSE (SAD) STUDY DESIGN

- Subjects with painful knee OA (N=48)
  - Kellgren-Lawrance (KL) grades 1-4 and active synovial inflammation by MRI
  - Randomized 3:1 to UBX0101 and placebo across 6 dose cohorts
  - Safety, tolerability and exploratory efficacy measures were assessed



UBX0101 was well-tolerated in Phase 1 studies

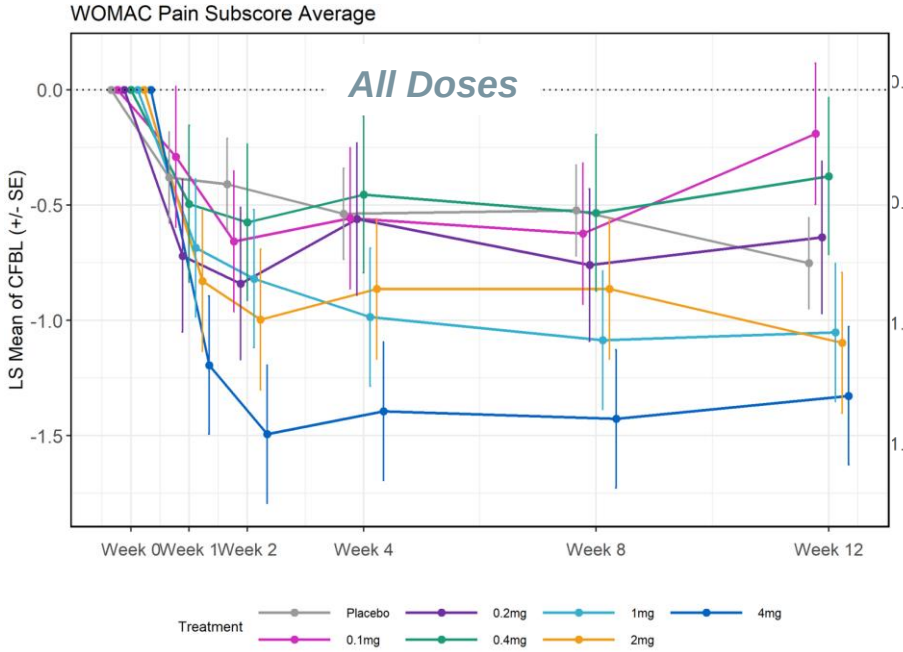
[a]Pre-specified combined cohort based on pharmacokinetic (PK) modeling.

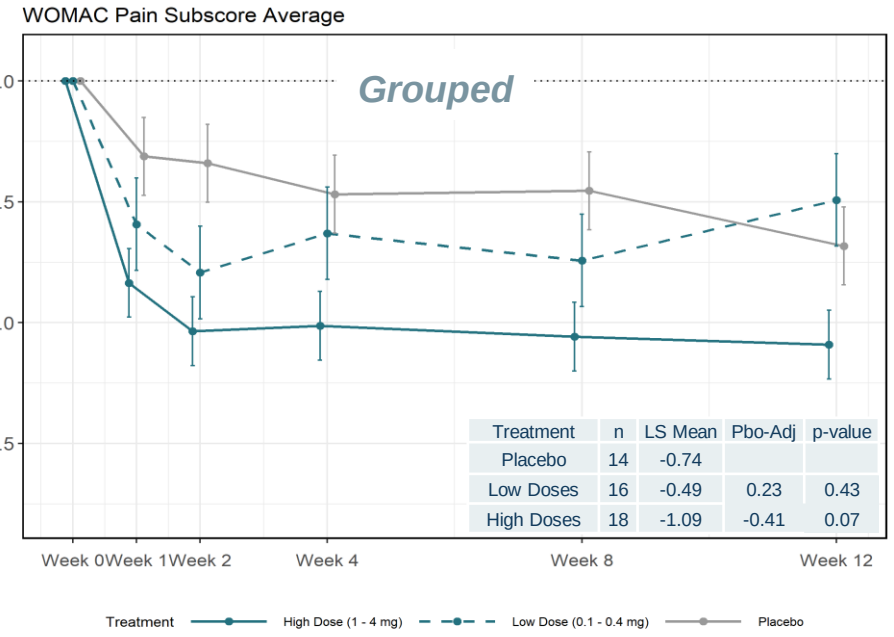
UNITY Study UBX0101-OAR-101.

SINGLE DOSE OF UBX0101 DECREASED PAIN

WOMAC-A

5 item, 0-4 point scale where a **0.5 point change** is considered clinically meaningful.

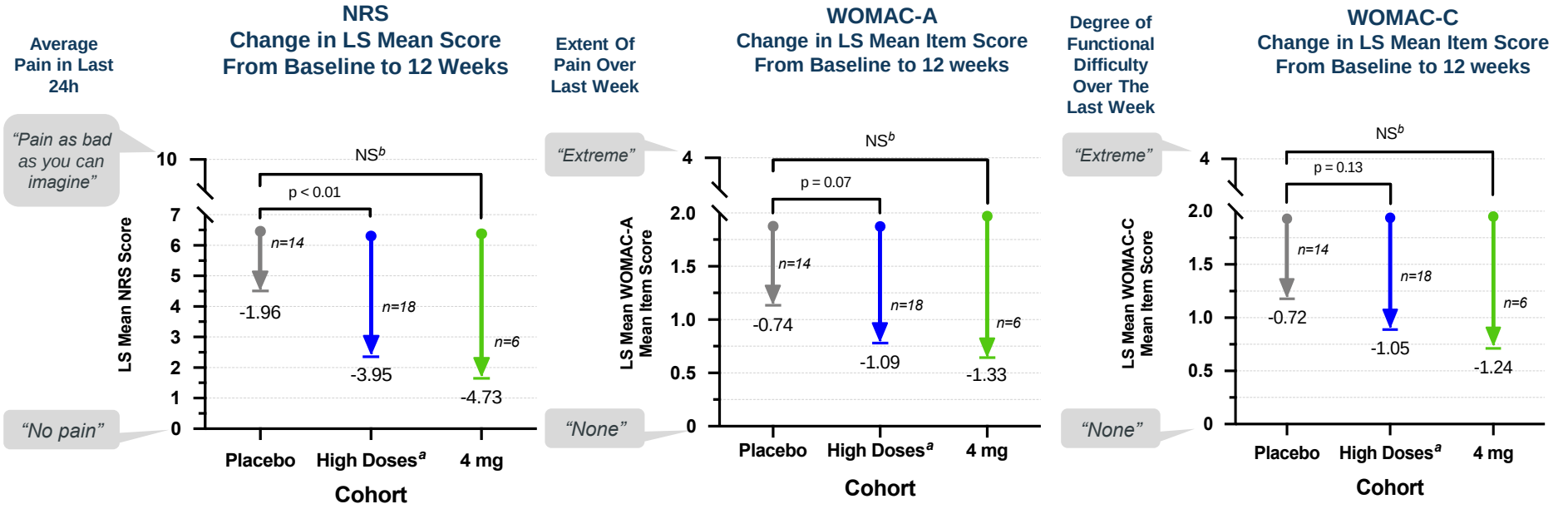




Treatment	n	LS Mean	Pbo-Adj	p-value
Placebo	14	-0.74		
Low Doses	16	-0.49	0.23	0.43
High Doses	18	-1.09	-0.41	0.07

Durable, dose-dependent and substantial effect

SINGLE DOSE OF UBX0101 IMPROVED PAIN AND FUNCTION AT 12 WEEKS



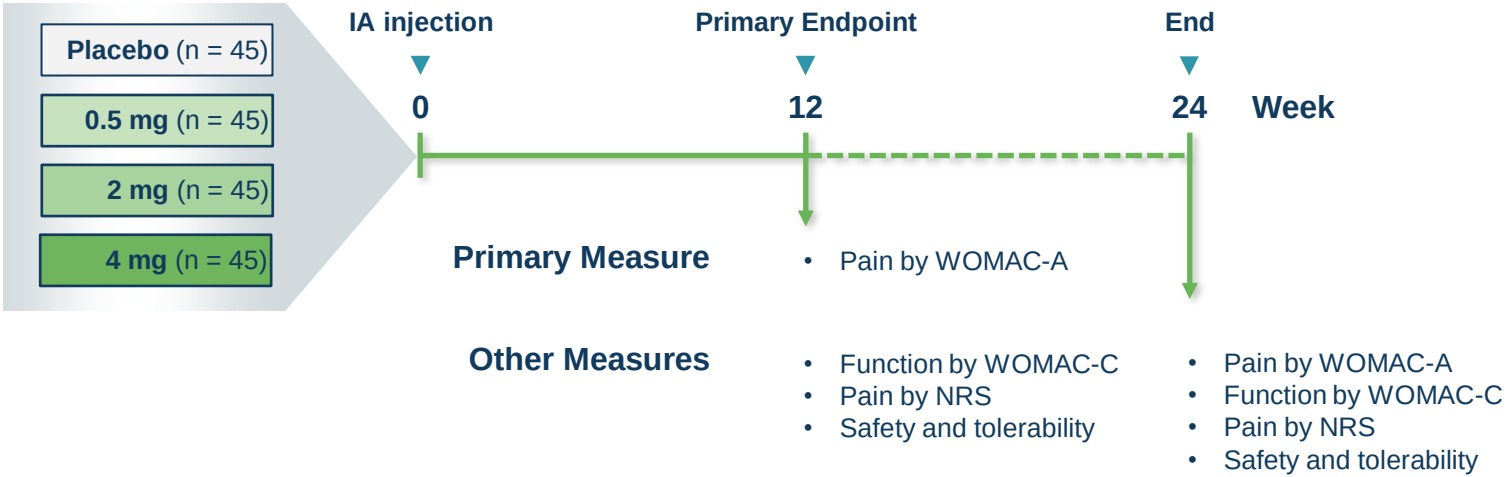
[a]Pre-specified high doses = 1, 2, and 4 mg cohorts
[b]NS = Not significant

Durable, dose-dependent and substantial effect across NRS, WOMAC-A and WOMAC-C

UBX0101 PHASE 2 STUDY DESIGN

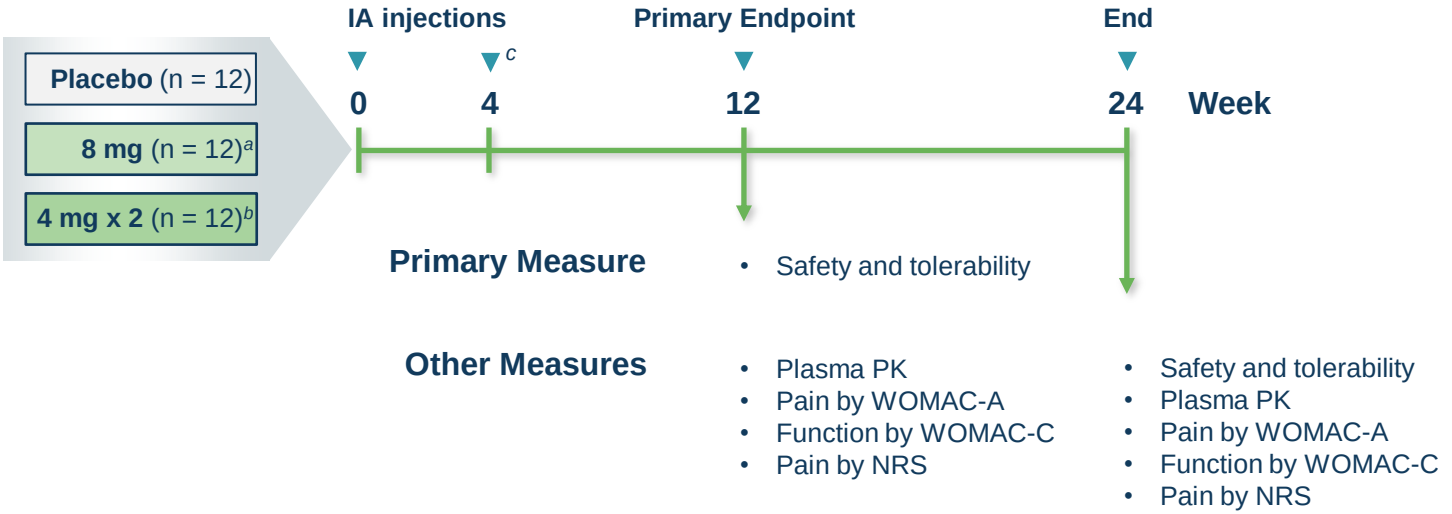
Designed to substantiate Phase 1 efficacy and explore duration and disease modification

A randomized, double-blind, placebo-controlled study evaluating three doses of UBX0101 administered via a single intra-articular injection



UBX0101 PHASE 1B HIGH DOSE AND REPEAT DOSE STUDY DESIGN

A randomized, double-blind, placebo-controlled study of single and repeat dose administration of UBX0101 in moderate to severe, painful OA of the knee



[a]High dose cohort.
[b]Repeat dose cohort.
[c]Only the repeat dose cohort and 6 placebo subjects will receive IA injections at Week 4.

POTENTIAL DIFFERENTIATING FEATURES OF UBX0101 IN OA

1. **Novel MOA**: eliminates SnCs → potential root cause of disease
2. **Large-Magnitude Effect**: Clinically meaningful impact on pain and function
3. **Durability** → sustained effect to 12 weeks in Phase 1 study

Phase 2 study designed to substantiate effects observed in Phase 1

OPHTHALMOLOGY

(AGE-RELATED EYE DISEASE INDICATIONS)

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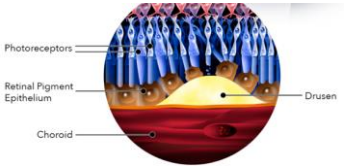
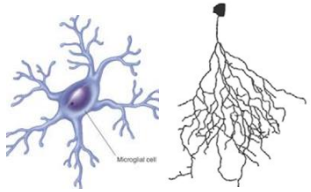
UNITY PIPELINE

Pursuing broad range of diseases with established endpoints and regulatory pathways

	MECHANISM	INDICATION	RESEARCH	LEAD OPTIMIZATION	IND-ENABLING	PHASE 1	PHASE 2	PHASE 3
MUSCULOSKELETAL	p53/MDM2 inhibition	Osteoarthritis	UBX0101					
OPHTHALMOLOGY	BCL2 inhibition	Age-Related Macular Degeneration, Diabetic Macular Edema, Diabetic Retinopathy	UBX1967 / UBX1325					
PULMONARY	Undisclosed	Idiopathic Pulmonary Fibrosis and other indications						
NEUROLOGY	Multiple mechanisms	Neurodegenerative and Cognition						
MULTIPLE	Undisclosed	Liver, Kidney						

ROLE OF SENESCENCE IN AGE-RELATED EYE DISEASE

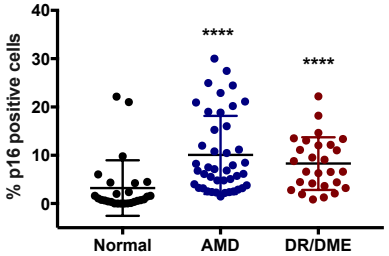
SnCs accumulate in the retina, potentially contributing to disease phenotypes

AMD		DR & DME
SnCs accumulate with with age in the retina retinal pigment epithelium (RPE) layer		**SnCs** accumulate in the retina with age & diabetic disease
senescent cell		
SASP → choroidal remodeling & RPE dysfunction → atrophy	SASP FACTORS (VEGF-α, IP-10)	**SASP** → ocular inflammation, abnormal blood vessel growth
senescence secretome	SASP FACTORS (PAI-1, IL-6, IL-8, VEGF)	
Disease → central vision loss		**Disease** → vision loss
disease symptoms		

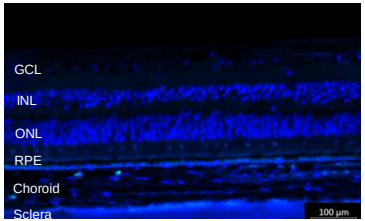
Oubaha et al., Senescence-associated secretory phenotype contributes to pathological angiogenesis in retinopathy, Sci. Transl. Med. 8, 362ra144 (2016)

SENESCENCE BURDEN IN AMD AND DR/DME

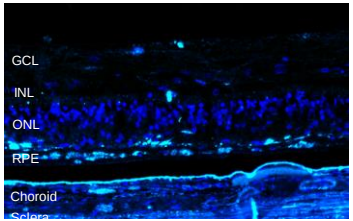
SNC BURDEN



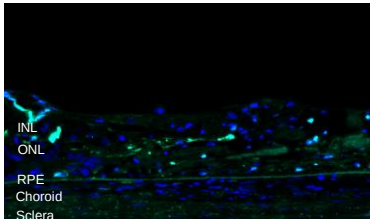
NORMAL (71F)



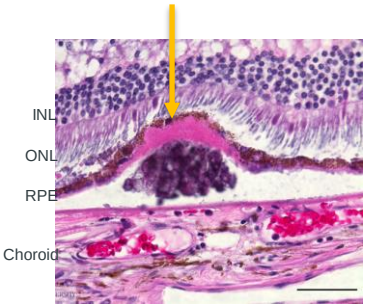
AMD (93M)



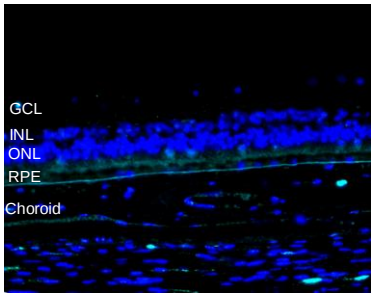
DR (64M)

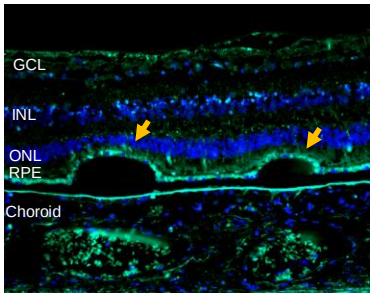


drusen



INTERMEDIATE AMD (86F)





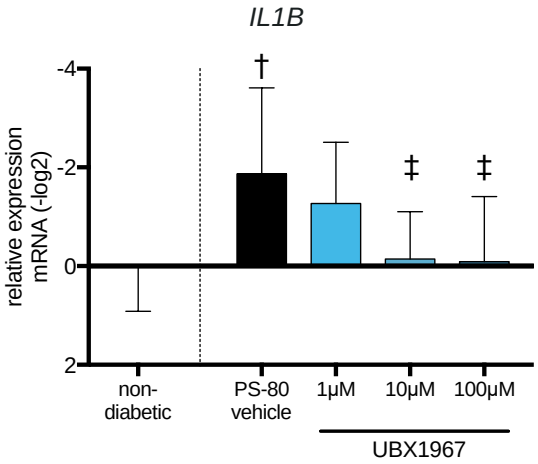
- Age-related eye diseases are multifactorial
- SnC burden increases with disease stage
- DR/DME patients show SnC in the retina and Choroid

Unpublished UNITY Data

Faidley EA (2008)

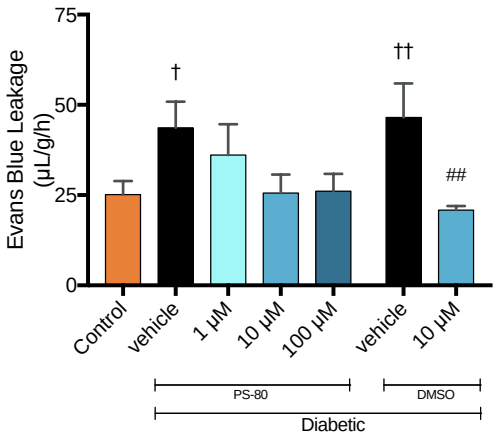
UBX1967 DEMONSTRATES EFFICACY IN MOUSE STZ

Streptozotocin (STZ) diabetic retinopathy model



† p<0.05 v. non-diabetic control by two-tailed t-test;
‡ p<0.05 v. Vehicle; one-way ANOVA, with Dunnett's multiple comparison test

Vascular Leakage
UBX1967

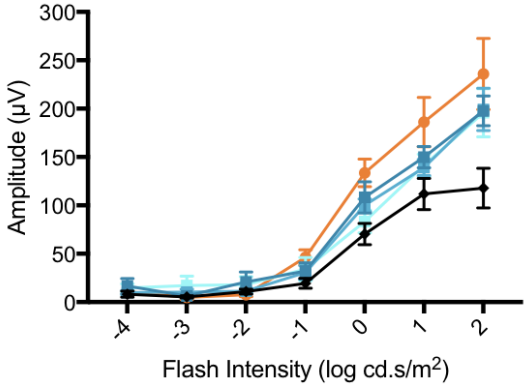


† p<0.05 v. Non-diabetic control by two-tailed t-test

†† p<0.01 v. Non-diabetic control by two-tailed t-test
p<0.01 v. DMSO control by two-tailed t-test

Effect on Photoreceptor Function

A-wave amplitude: week 10



**** p<0.0001 v. Non-diabetic control; # p<0.05, ## p<0.01 v. Vehicle control by 2-way ANOVA with Tukey's multiple comparison test
No significant difference between Non-diabetic control and Unity treatment groups

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

1 μM = ~1.7 ng of UBX1967

VALUE PROPOSITION FOR SENOLYTICS IN MULTIPLE AGE-RELATED EYE DISEASES

DIFFERENTIATING PRECLINICAL FEATURES

1. **Bcl senolytic:** Potent inhibitor of Bcl family
2. **Novel MOA**: eliminates SnCs → reduces multicomponent SASP
3. ***in vivo* efficacy** → activity in two preclinical models of retinopathy

PROPOSED CLINICAL BENEFITS

- Potential for improvements in visual function over anti-VEGF therapy
- Potential for efficacy in patients that don't respond to anti-VEGF therapy
- Potential for efficacy in combination with anti-VEGF therapy

Potential to reduce SASP factors across multiple diseases of aging retina

SUMMARY

FINANCIAL METRICS AND MILESTONES

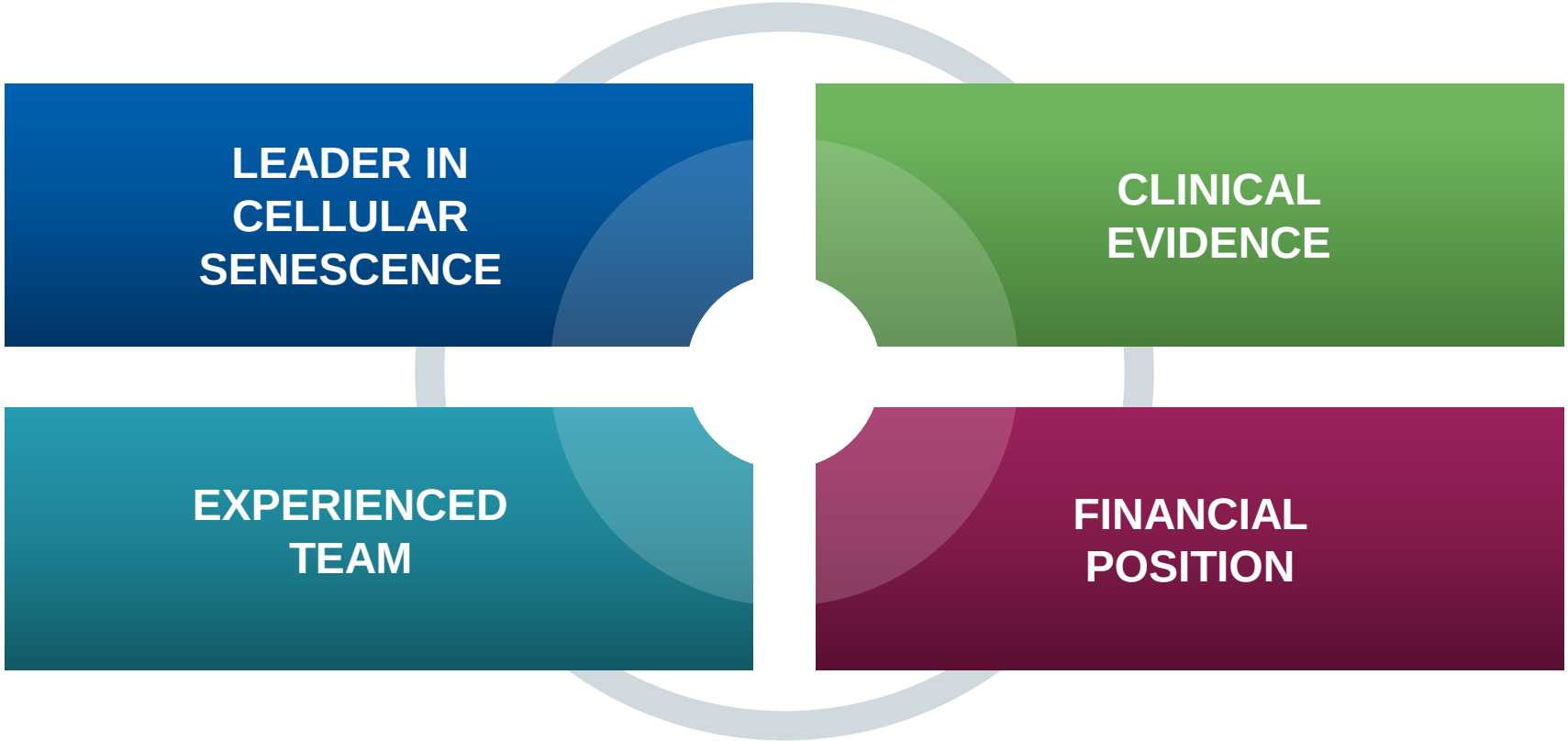
FINANCIAL

- $109.2 million cash equivalents and investments as of March 31, 2020
- Cash runway into 2nd half of 2021

MILESTONES

- ✓ Q1 2020 – UBX0101 Ph2 enrollment complete
- ✓ Q1 2020 – First patient dosed in UBX0101 Ph1b (8 mg and 4 mg x 2)
- 3Q 2020 – Topline 12-week data expected from UBX0101 Ph2
- 2H 2020 – Ph 2 24-week data & Ph 1b 12 and 24-week expected from UBX0101
- 2H 2020 – Anticipate Ophthalmology first patient dosed in first-in-human study
  - To enable multiple indications (e.g., AMD, DR and DME)
  - Data expected 2021

UNITY BIOTECHNOLOGY



At UNITY we are developing medicines designed to:

AGE-RELATED DISEASE

HEALTHSPAN

UNITY BIOTECHNOLOGY

APPENDIX

UNITY
BIOTECHNOLOGY

EMERGENCE OF NEW THERAPEUTIC APPROACH

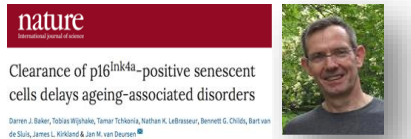
Leveraging cellular senescence biology

1960s — DISCOVERY OF CELLULAR SENESCENCE

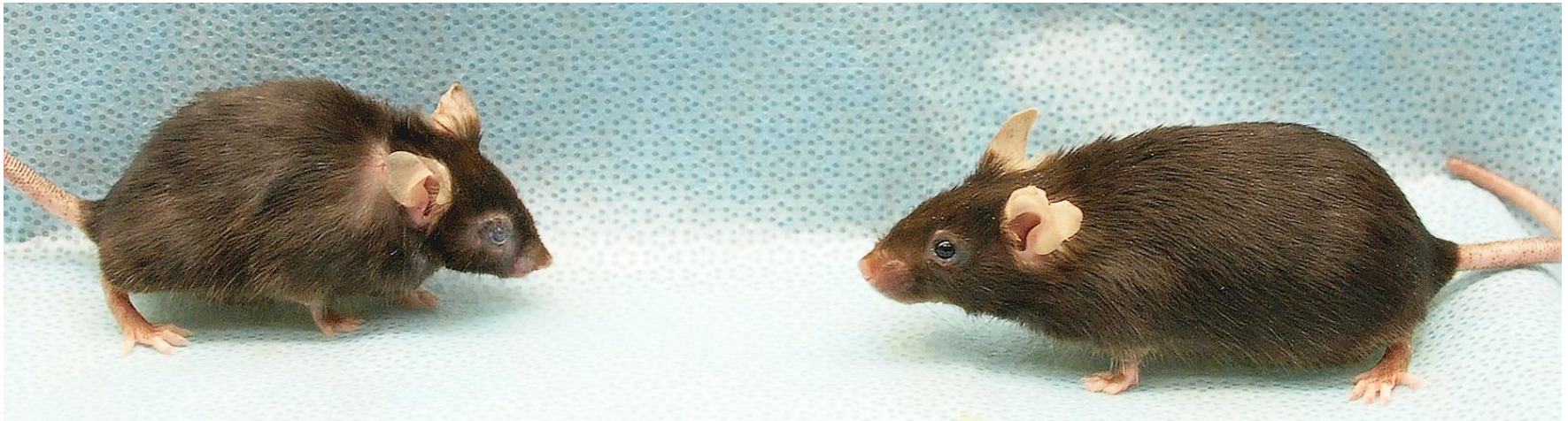
1990s — IDENTIFICATION OF SENESCENCE BIOMARKER

2000s — LINK TO AGING PHENOTYPES & IDENTIFICATION OF SASP

2011 — SENOLYSIS AS AN APPROACH TO TREAT DISEASES OF AGING



CLEARING SnCs: SIGNIFICANT IMPACT ON AGING



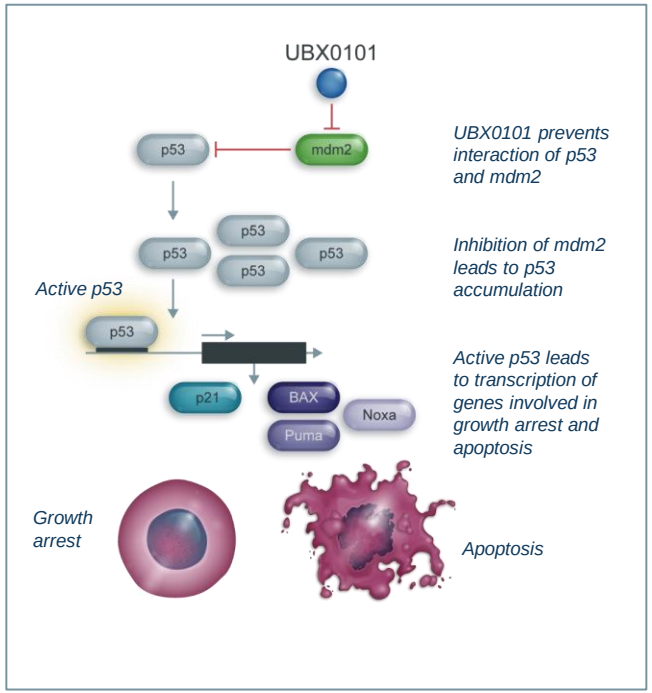
- Cartilage loss
- Reduced locomotion
- Sarcopenia
- Frailty
- Eye disease
- CNS Dysfunction
- Cardiac Dysfunction
- Cancer
- Kidney Dysfunction
- Loss of subcutaneous fat

SIGNIFICANT EXTENSION OF HEALTHSPAN

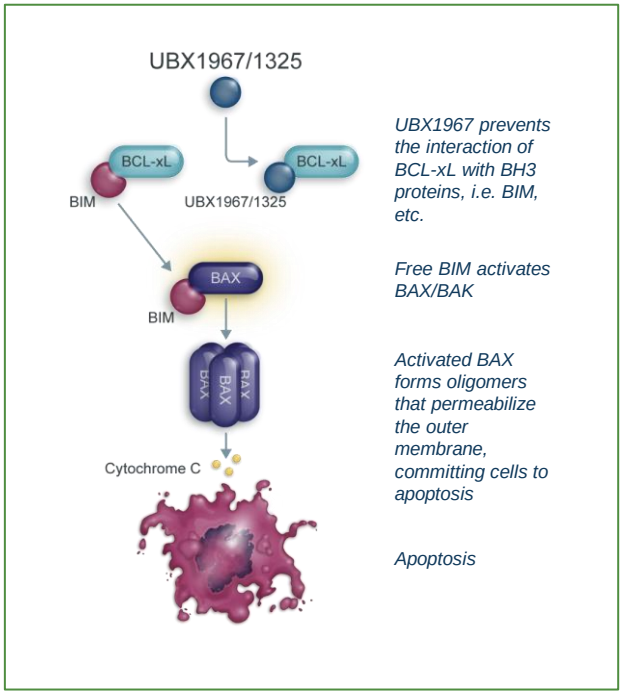
(AND UP TO 35% INCREASE IN MEDIAN LIFESPAN)

Jeon et. al. Nature 2017; Bussian et. al. Nature 2018; Baker et. al. Nature 2011; Childs et. al. Science 2016; Childs et. al. Nature 2017; Oubaha et. al. Sci. Transl. Med. 2016; Change et. al. Nature 2015; Coppe et. al. PLos Biology 2008; Baker et. al. Nature 2016; Baker et. al. Nature 2015

SENOLYTICS ELIMINATE SENESCENT CELLS BY TARGETING WELL-DEFINED SURVIVAL PATHWAYS

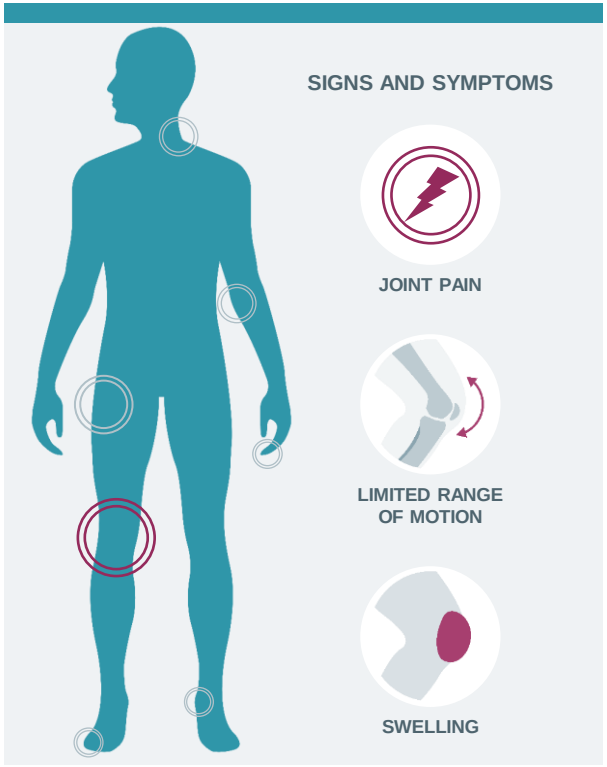


p53/mdm2



Bcl-2

OSTEOARTHRITIS IS HIGHLY PREVALENT AND BURDENSOME



Large and **growing stress** on healthcare system

~10-15% of population >60 years old

Current therapies are palliative and may be associated with safety concerns (e.g. IA steroids)

OA is believed to be a multifactorial disease

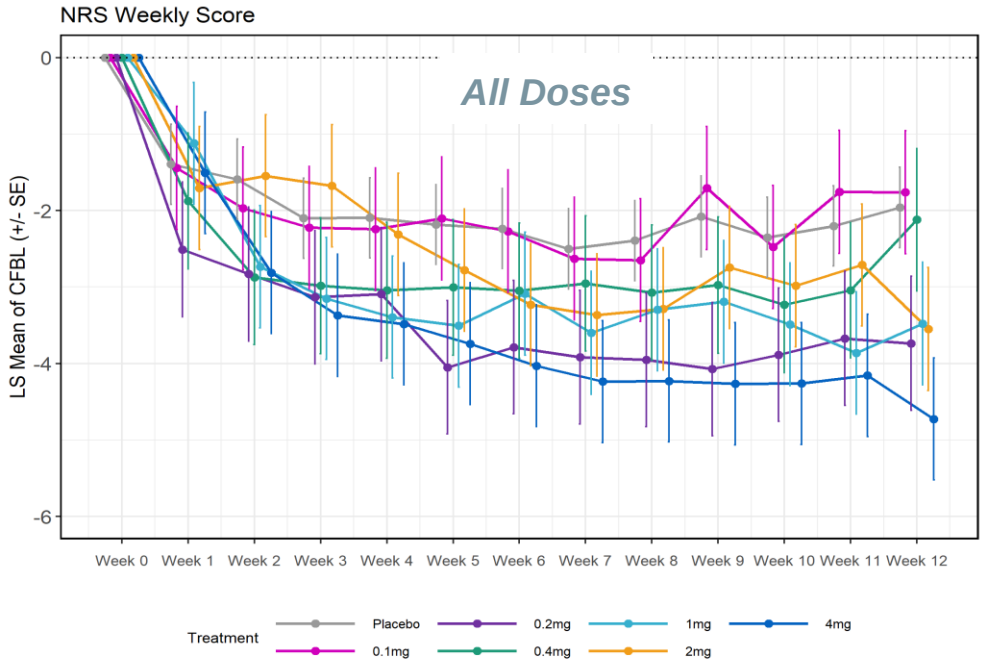
Opportunity for **non-steroidal MOA** and for products with potential for **disease modification**

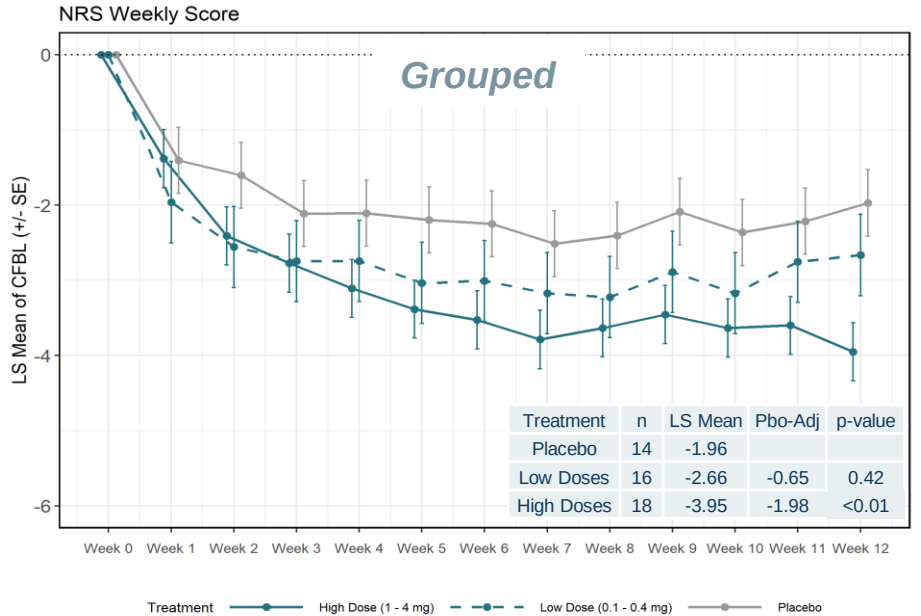
SoC is pain mitigation or joint replacement

SINGLE DOSE OF UBX0101 DECREASED PAIN

Numerical Rating Scale (NRS)

0-10 point scale where a **2 point change** is considered clinically meaningful.





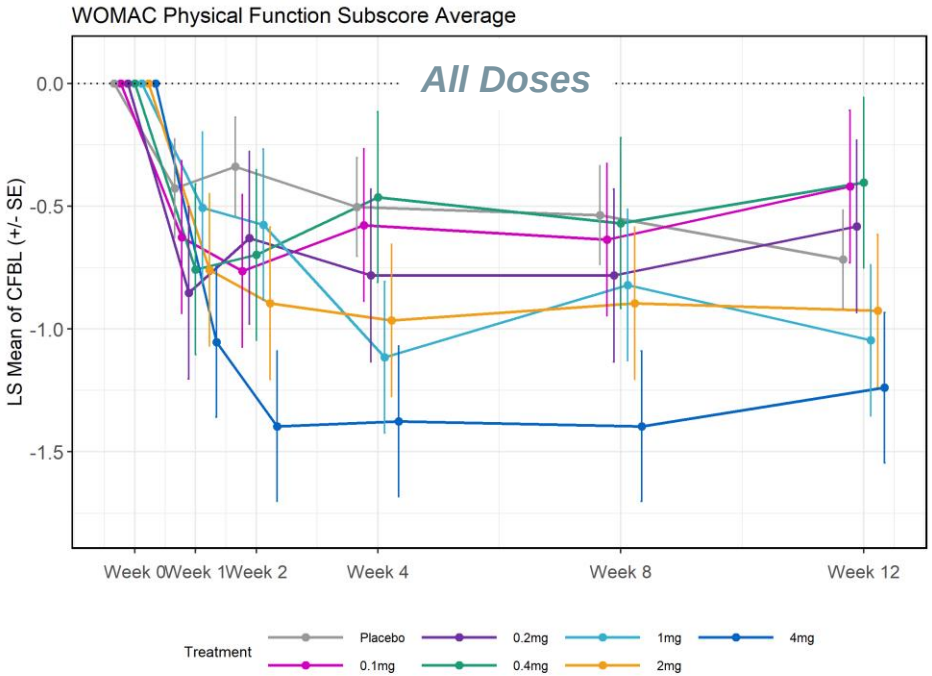
Treatment	n	LS Mean	Pbo-Adj	p-value
Placebo	14	-1.96		
Low Doses	16	-2.66	-0.65	0.42
High Doses	18	-3.95	-1.98	<0.01

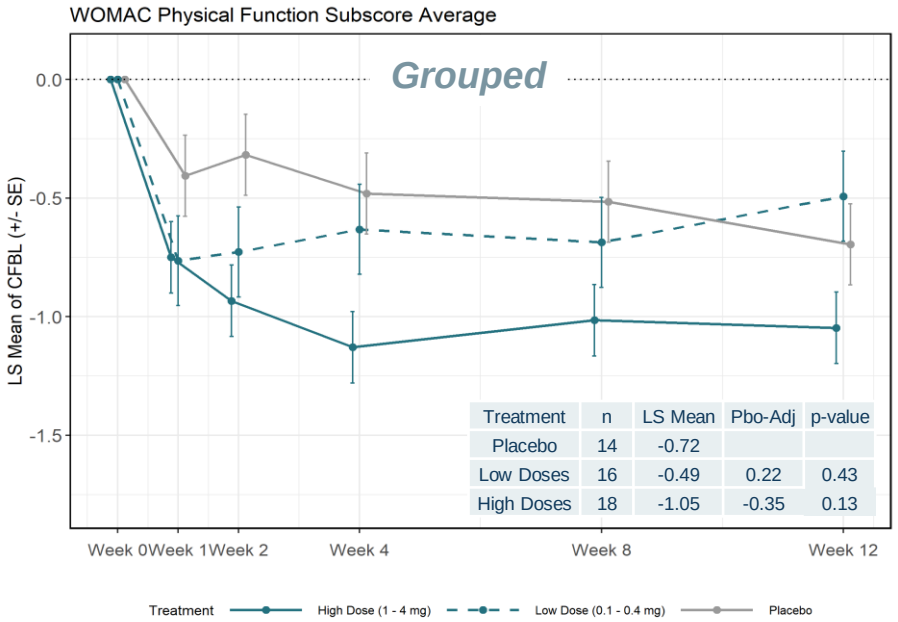
Durable, dose-dependent and substantial effect

SINGLE DOSE OF UBX0101 IMPROVED FUNCTION

WOMAC-C

17 item, 0-4 point scale where a **0.3 point change** is considered clinically meaningful.





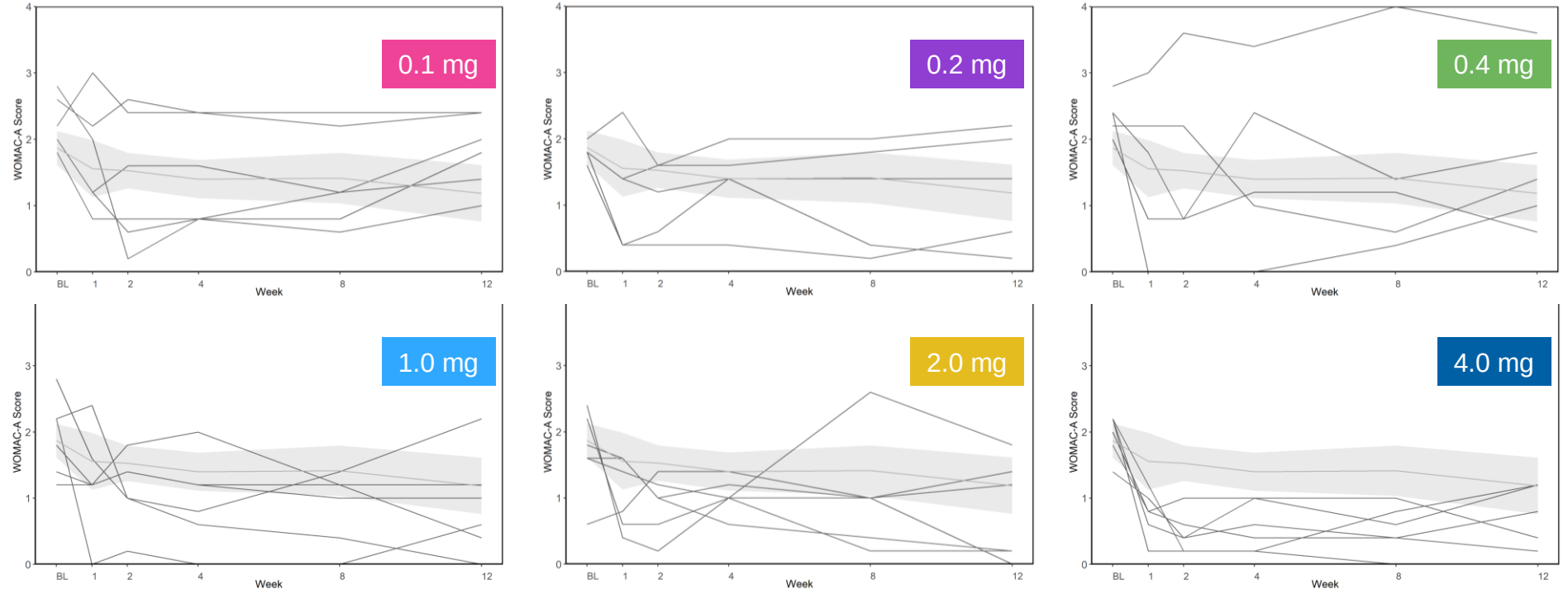
Treatment	n	LS Mean	Pbo-Adj	p-value
Placebo	14	-0.72		
Low Doses	16	-0.49	0.22	0.43
High Doses	18	-1.05	-0.35	0.13

Durable, dose-dependent and substantial effect

SINGLE DOSE OF UBX0101 DECREASED PAIN

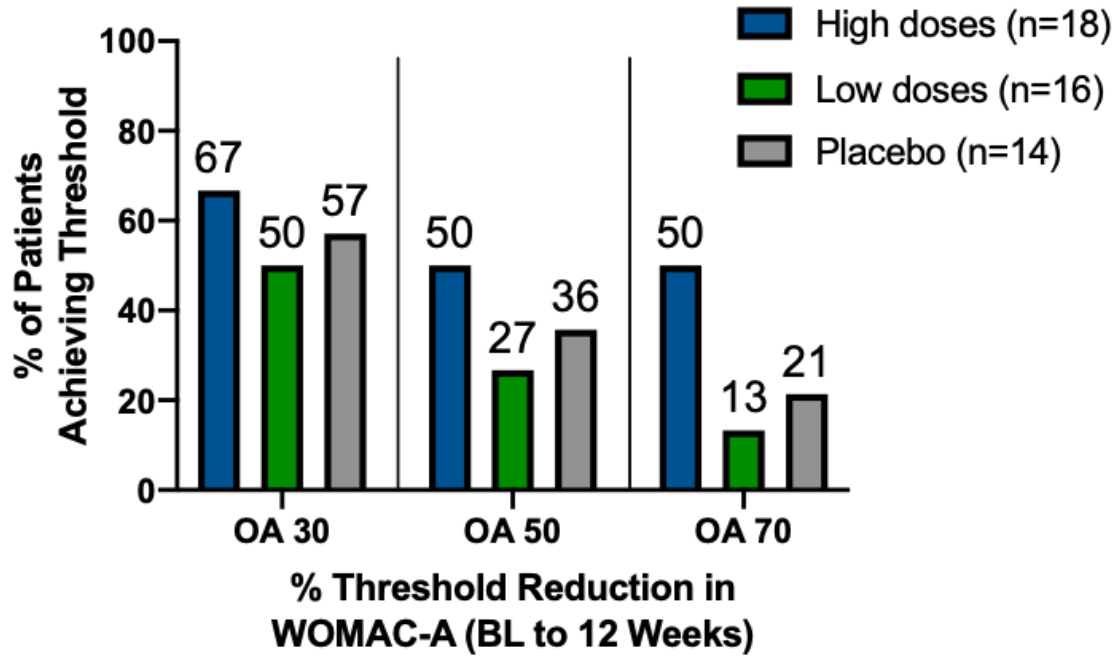
WOMAC-A

5 item, 0-4 point scale where a **0.5 point change** is considered clinically meaningful.



Individual variability decreases as dose increases

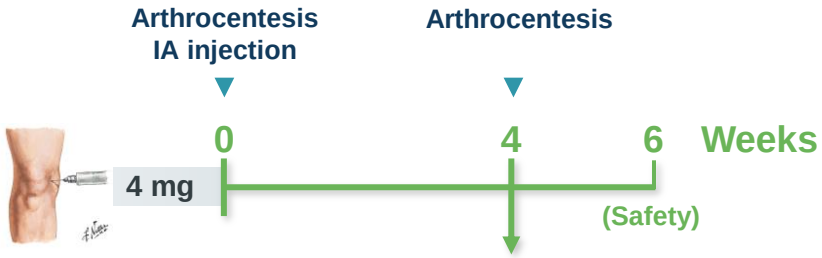
SINGLE DOSE OF UBX0101 DECREASED PAIN



UBX0101 PHASE 1 SINGLE-DOSE BIOMARKER STUDY

Study Design

- Subjects with painful knee OA (N=30)
  - Randomized 2:1 to single 4mg UBX0101 injection and pbo
  - Arthrocentesis at baseline and Week 4



Primary Measure

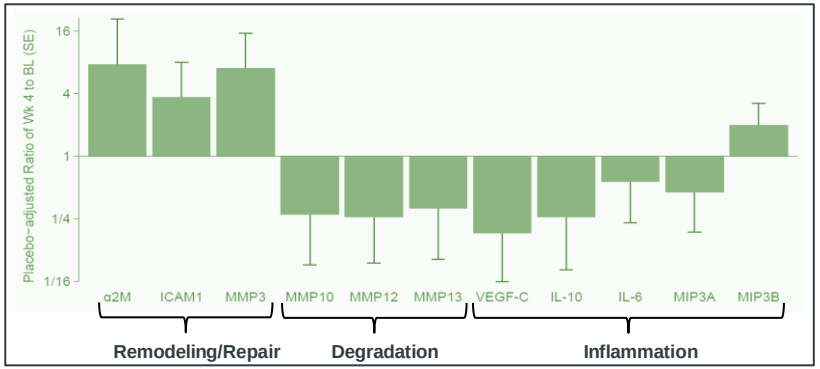
- Safety and tolerability

Other Measures

- Biomarker analysis
- Plasma PK
- WOMAC

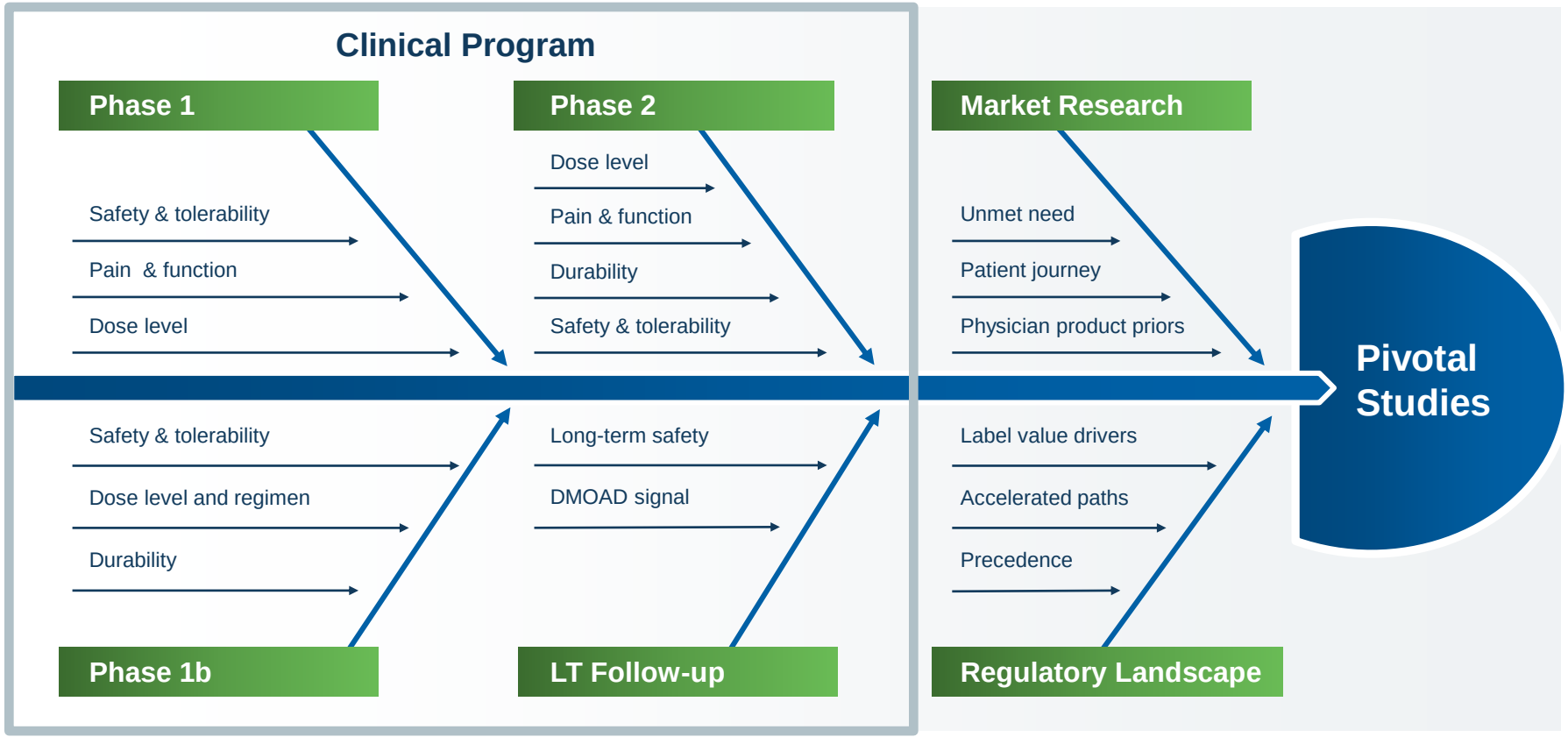
Results

- Resulted in modulation of OA biomarkers
  - Well-tolerated
  - Remodeling/repair, tissue degradation, and inflammatory proteins were impacted[a]
  - Results consistent with a reduction senescence burden



[a]Mathiessen and Conaghan. *Arthritis Res Ther* 2017;19:18.
[b]α2M, alpha 2 macroglobulin; ICAM, intracellular adhesion molecule; IL, interleukin; MIP; macrophage inflammatory protein; MMP, matrix metalloproteinase; VEGF, vascular endothelial growth factor.

INFORMING PIVOTAL STUDIES



AGE-RELATED EYE DISEASES ARE SIGNIFICANT PUBLIC HEALTH BURDENS AND MAY BE TREATABLE WITH A SENOLYTIC

AGE-RELATED MACULAR DEGENERATION (AMD)

170M GLOBAL PREVALENCE

Leading cause of visual disability in industrialized world

Significant treatment burden leads to non compliance

Current treatment
wAMD: anti-VEGF therapy

No effective treatment for those who have progressed to dAMD

DIABETIC RETINOPATHY (DR)

90M GLOBAL PREVALENCE

Complication of diabetes leading to blood vessel damage

Current treatment
Diabetes control, anti-VEGF, laser photocoagulation

~33% of diabetes patients have signs of DR

>8B in global annual anti-VEGF sales

DIABETIC MACULAR EDEMA (DME)

20M GLOBAL PREVALENCE

Manifestation of DR

Current treatment
Diabetes control, corticosteroids, anti-VEGF laser photocoagulation

primary cause of vision loss in diabetics

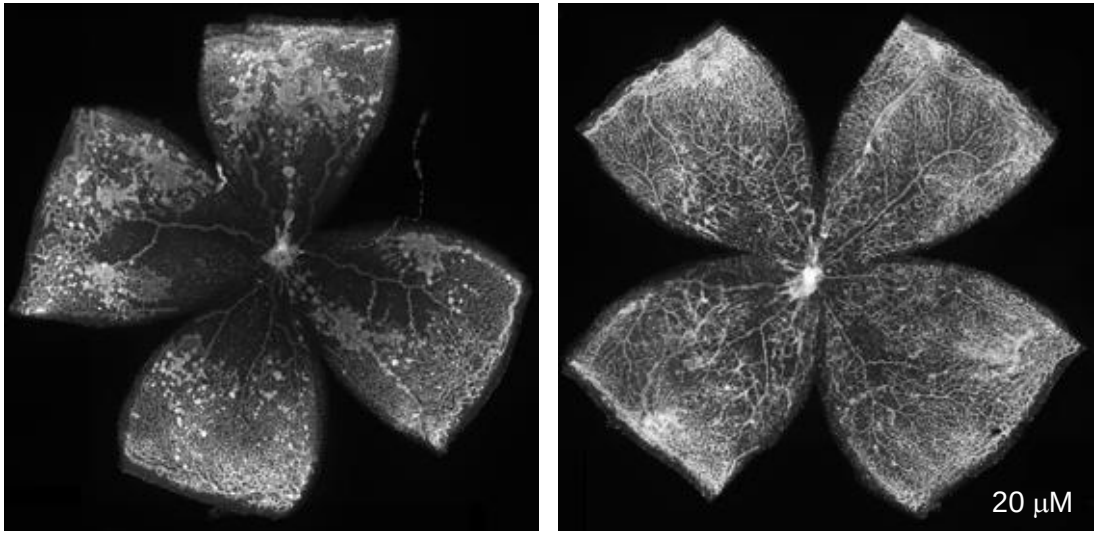
CURRENT TREATMENT

anti-VEGF not as effective in eye-diseases outside of wAMD
Laser photocoagulation has varied outcomes
Both anti-VEGF and diabetes control has compliance issues

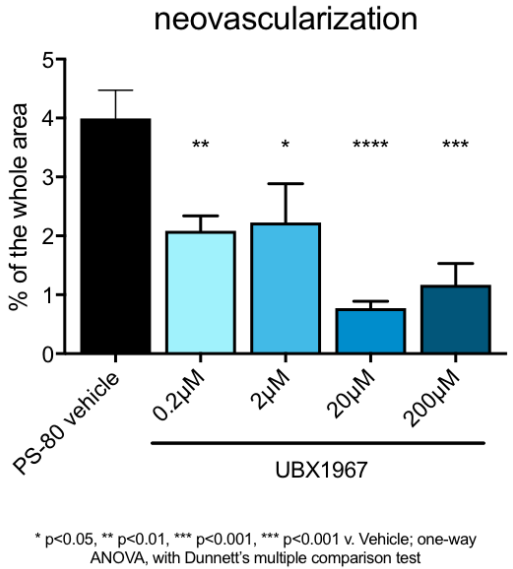
UBX1967 DEMONSTRATES EFFICACY IN MOUSE OIR

Oxygen induced retinopathy (OIR) model

Vehicle	UBX1967



Improves Retinal Vasculature



* p<0.05, ** p<0.01, *** p<0.001, *** p<0.001 v. Vehicle; one-way ANOVA, with Dunnett's multiple comparison test

Intravitreal dosing improves retinal vasculature