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Pioneering Precision Therapeutics for Senescence Driven Diseases

Non-Confidential Deck

SentaurBio Harnessing the Therapeutic Potential of Senescence Biology

Discover and develop breakthrough treatments by selectively targeting senescent cells (SnCs)

Company

M Ventures-backed biotech, founded in 2019 based on IP licensed from the laboratory of Valery Krizhanovsky from the Weizmann Institute of Science

Discovery Platform

Powerful differential proteomics platform of senescent cell surface proteins enables precision targeting of pathologic SnCs

Pipeline

Two highly distinct Abs candidates that selectively target disease-relevant senescent cells offering potential therapeutic options for age-related diseases

Focused Therapeutic Areas

Senescence driven diseases with primary focus on therapy induced senescence in oncology and long-term goal of increasing humanity's healthy lifespan

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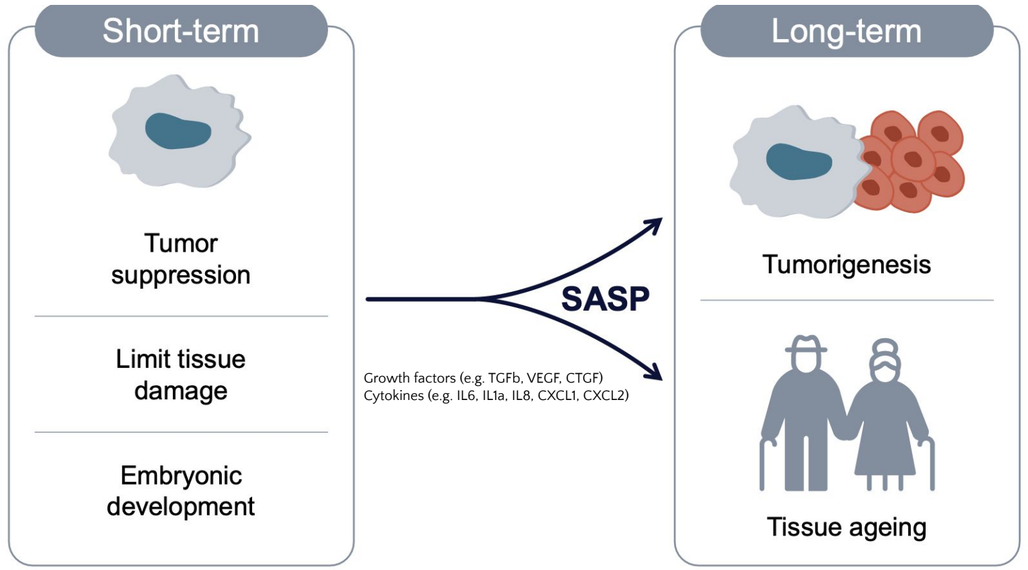
M Ventures – Merck KGaA strategic corporate venture capital fund
SnCs – Senescent Cells
Abs - Antibodies

Senescence Biology

Senescence promotes age-related diseases including cancer

- Senescence is a stable form of **cell cycle arrest**[1]
- **Senescence serves as a defensive barrier** to fibrosis and tumorigenesis and is essential for wound healing and embryonic development[1]
- When senescent cells **accumulate** in tissues, they induce **inflammation**, **tissue ageing** and **promote tumor progression** through senescence-associated secretory phenotype (SASP)[3]
- **Elimination of SnCs was found to be beneficial** in multiple preclinical models by
  - Alleviating **age-related diseases**[2]
  - Decreasing **tumor progression**[4]
  - Increasing **healthy lifespan**[2]

Senescence Biology- A Double-Edged Sword[1]



Elimination of SnCs represents a potential therapeutic approach for multiple age-related diseases

SnCs – Senescent cells

1. Burton & Krizhanovsky, Cellular and Molecular Life Sciences, 2014
2. Gil & Withers, Nature 2016
3. Chaib et al., Nature Medicine 2022
4. Saleh et al., Molecular Oncology 2020

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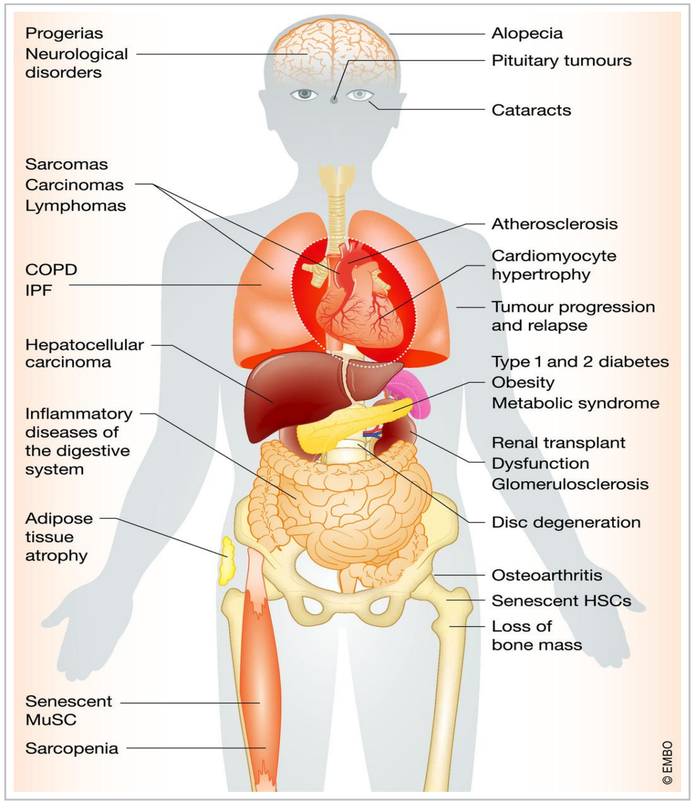
Targeting Senescent Cells

Therapeutic Approach for Large Potential Market with High Unmet Need

- Senescent cells **accumulate with age** and are implicated in various **debilitating age-related diseases**[1]
- **Most chemotherapy and irradiation** therapies that are commonly used in multiple cancer types, induce senescence (**Therapy Induced Senescence** or TIS) [2,3]
- Longevity and anti-senescence market size value is predicted to reach **~$45 billion by 2031** with CAGR of 6.5%[4]
- Most anti-senescence therapies (senolytics) under development **do not selectively target SnCs** and are in relatively early stage[4]
- Due to senescence's essential defensive role, developing **precision therapeutics** targeting SnCs represents a **major unmet need**[5]

Age-Related Diseases Relevant to Senescence[1]



Sentaur's approach holds the potential to address the main challenge in the senescence space

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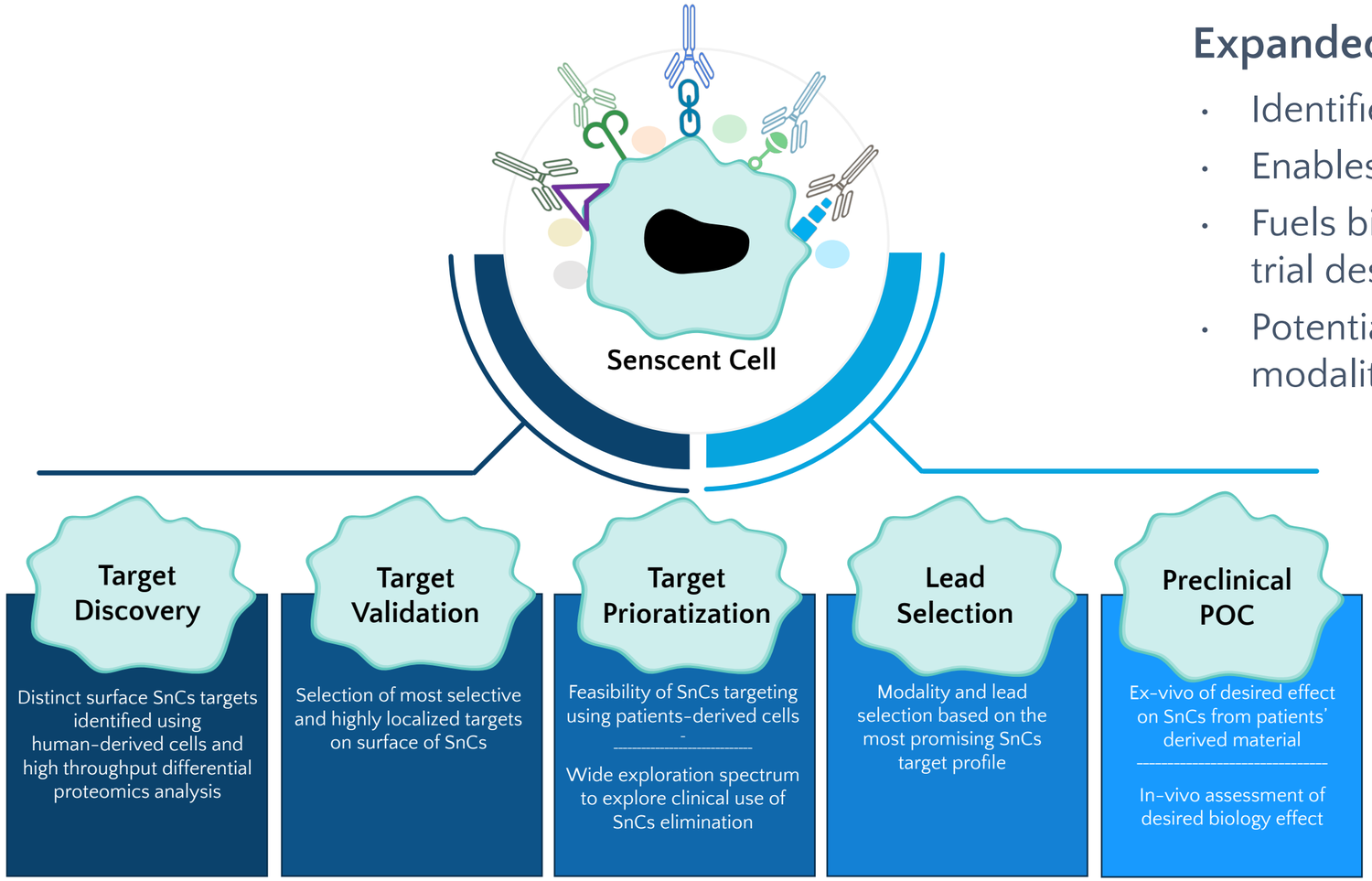
TIS – Therapy Induced senescence
SnCs – Senescent cells

1. Paez-Ribes et al., EMBO Mol Med 2019
2. American cancer society
3. Bousset et al., Molecular Oncology 2022
4. Insight Ace Analytics report #1354 2023
5. Ovadya et al, Nature Comm. 2018

Sentaur's Senescence-Focused Target Discovery Engine

De-risked R&D strategy using human and patients derived samples



Expanded library of surface SnCs targets

- Identified distinct senescent cell surface proteins
- Enables precision targeting
- Fuels biomarker discovery for efficient & de-risked clinical trial design
- Potential to expand to multiple TAs, MoAs using various modalities (e.g., ADC, bi-specific, fusion protiens, etc.)

Core platofrm for growing novel pipeline and partner programs

SnCs – Senescent Cells
ADC- Antibody Drug Conjugate
TA – Therapeutic Area
MOA – Mechanism of Action

Pipeline Covers Wide Spectrum of High Value Indication

Selectively targeting distinct disease-relevant senescent cells

CANDIDATE	TARGET	INDICATION/S	DISCOVERY	PRECLINICAL	IND-ENABELING	PHASE 1/2
SB101	Undisclosed	TIS in in multiple cancer types				
SB201	Undisclosed	Screening				
SBXXX	Screening					

Adressing a substential unmet need for persicion targeting of senescent cells

TIS – Therapy Induced senescence

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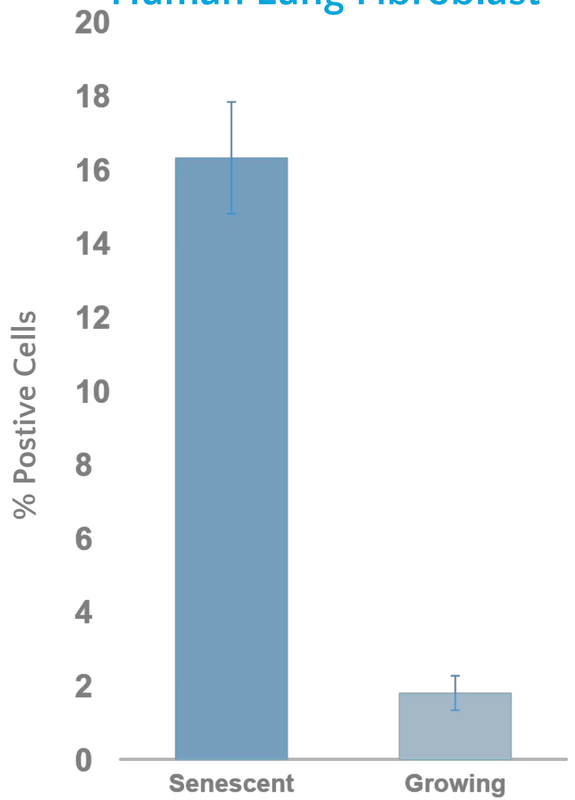
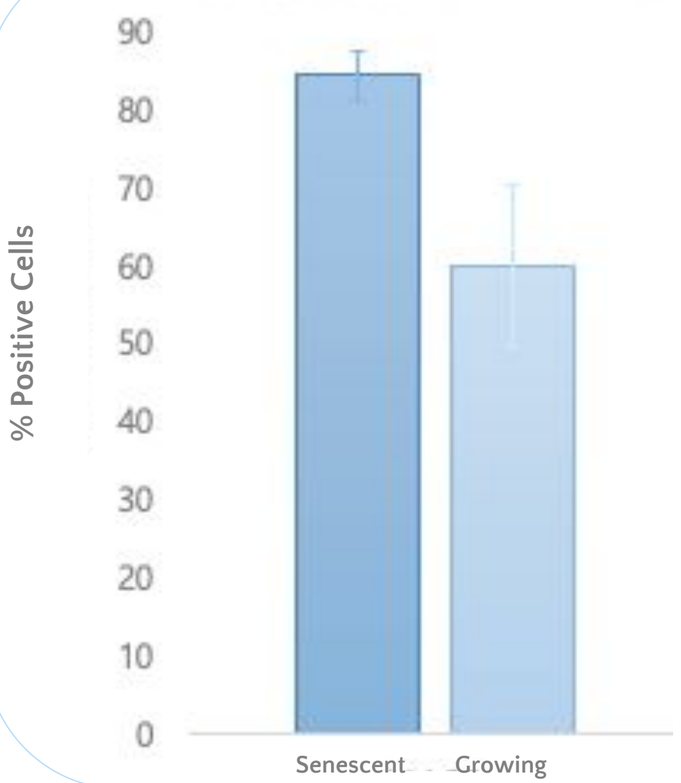
SB101 Binds to Tumor and Senescent Cells But Not Normal Cells

Selectively Binds to Senescent Human Lung Fibroblast



Binds Senescent and Lung Tumor Cells



Potential cancer therapeutic with dual effect on senescent and tumor cells

*SB101 – Unconjugated murine Ab

SnCs – Senescent Cells
IMR-90 – Lung fibroblasts
H460 – lung tumor cells

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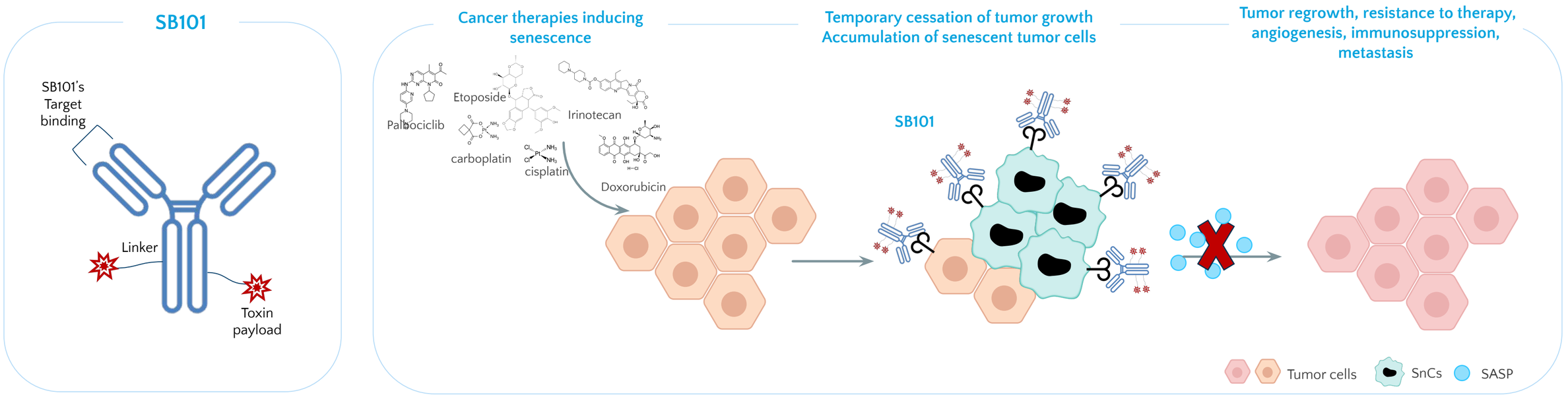
SB101 Mechanism of Action

Potential Treament for Therapy-Induced Senescence in Cancer

- SB101 is an antibody drug conjugate that binds to its target localized on senescent and tumor cells
- The target of SB101 is an intracellular protein translocated to the cell surface as a result of severe ER-stress, a phenomenon that does not occur under normal conditions



SB101 - ADC with dual effect on both senescent and tumor cells

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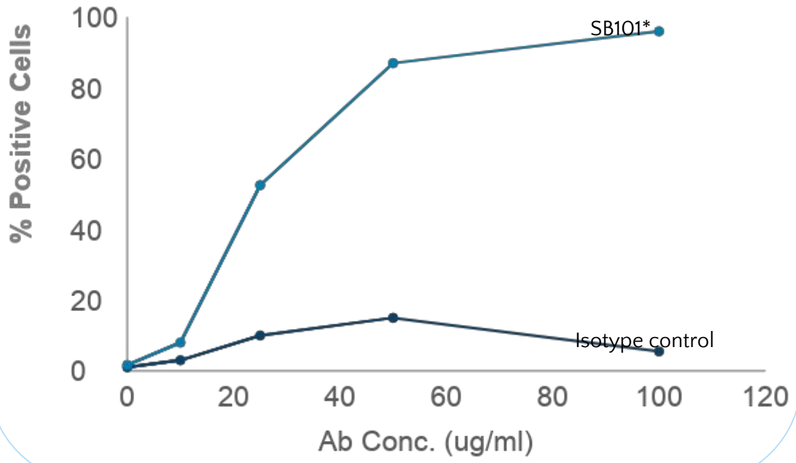
SnCs – Senescent cells

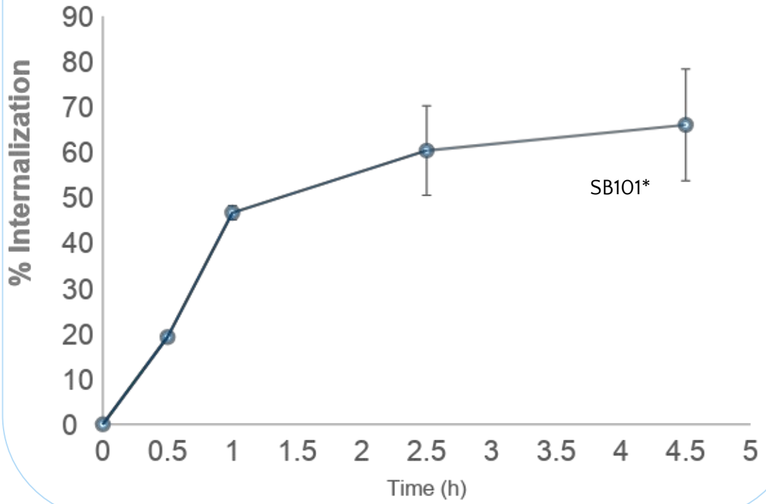
Conjugated SB101 Exhibit Potent Cytotoxic Effect

Strong binding and elimination of senescent lung tumor cells

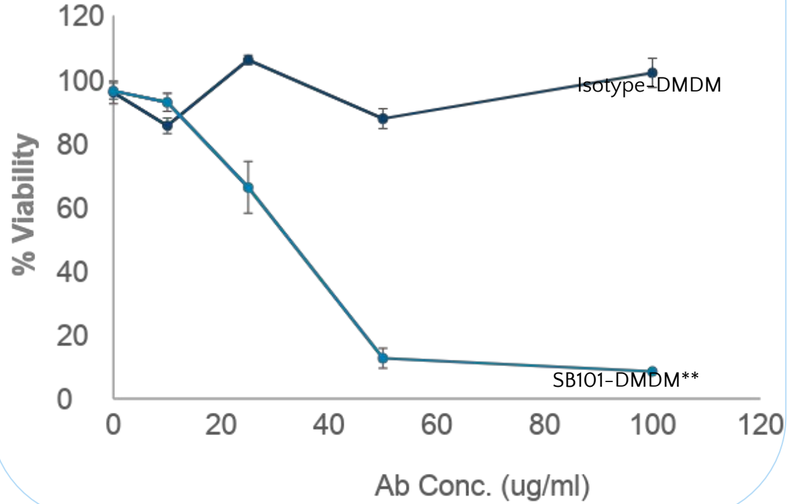
Substantial Binding to Senescence Lung Tumor Cells



Significant Internalization within 4hr



Eliminating Majority of Senescent Lung Tumor Cells



SB101 ADC eliminates senescent cancer cells upon binding to its target

*SB101 murine Ab with secondary Ab conjugated to fluorescent marker
**SB101DMDM – murine Ab with secondary commercial Ab conjugated to Duocarmycin
ADC – Antibody Drug Conjugate
H460 – Lung Tumor Cells

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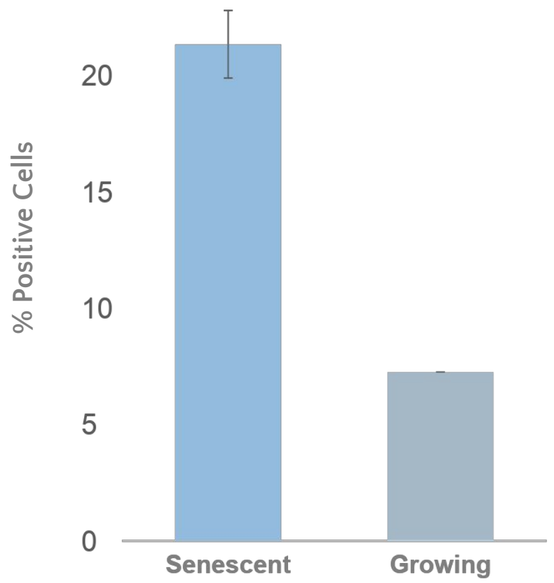
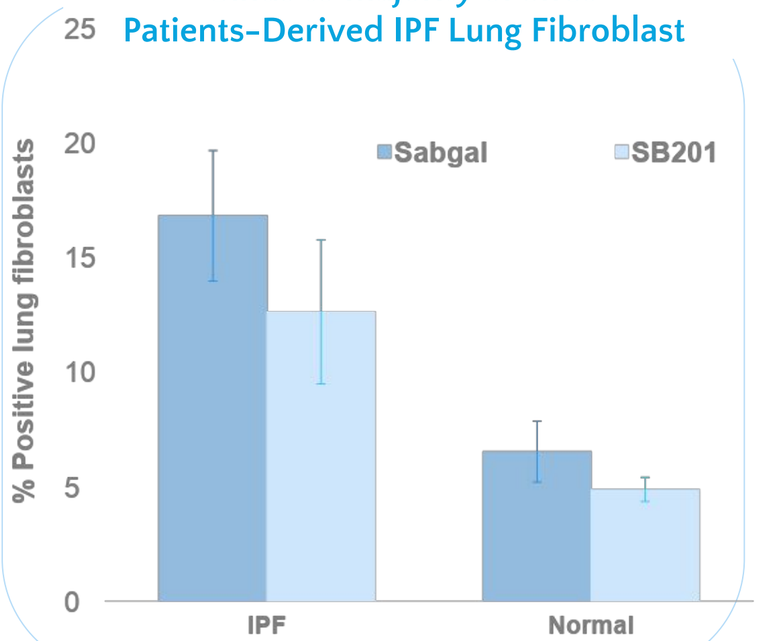
SB201: Important Differentiation in Ability to Selectively Target Pathologic Senescent Cells

- SB201's target is an intracellular protein found for the **first time to be localized on the cell surface**
- SnCs with SB201 target were found to over **express anti-apoptotic and protein secretory pathways genes**
- SB201 is an antibody that **preferentially binds to senescent cells** of various origins

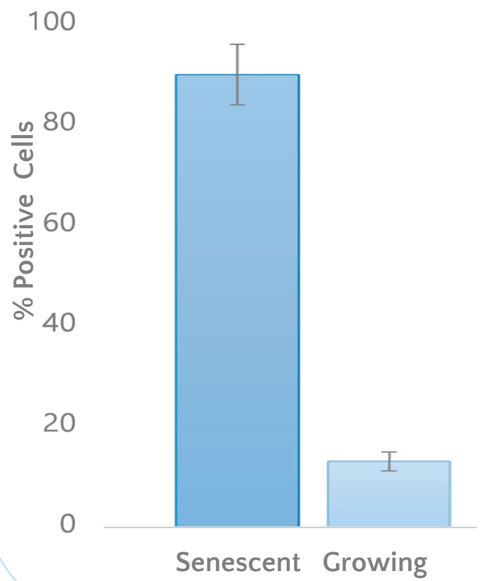
Specific Binding to Human Lung Fibroblast SnCs



Binds to Majority of SnCs Patients-Derived IPF Lung Fibroblast



Binds Only to Human Senescent Tumor Cells



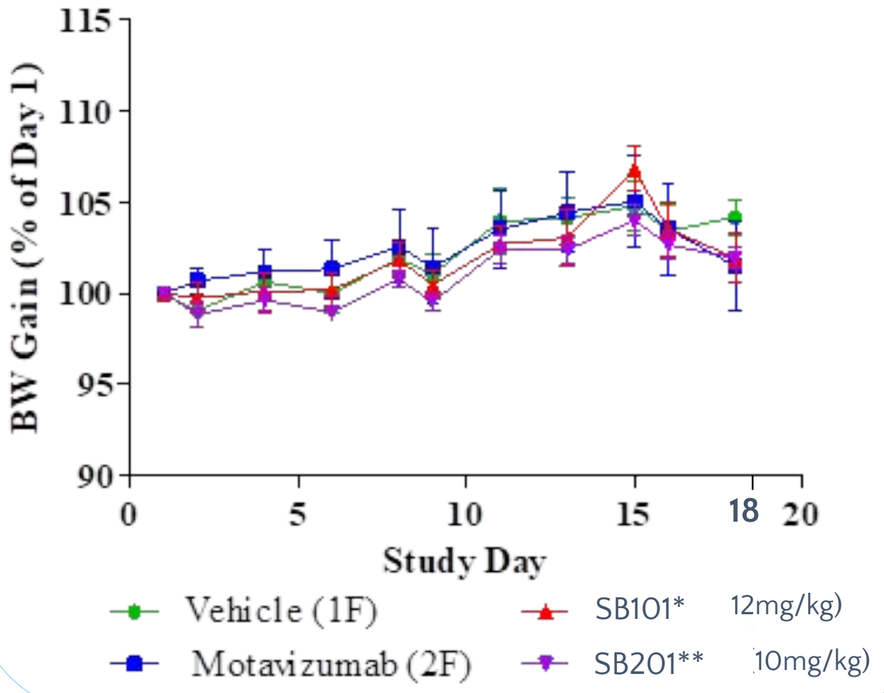
Potential therapeutic target for multiple indications involving senescence

SnCs – Senescent Cells
SB201 –murine Ab
H460 – Lung cancer cells
Sabgal – marker for SnCs

SB101 & SB201 Safety Demonstrated in Preliminary Toxicity Study

- 5 repeated, twice weekly, IV administrations of unconjugated SB101 and SB201 didn't cause mortality or morbidity
- No toxic or adverse symptoms were observed during the treatment
- No treatment-related or toxicologically significant changes were observed
- No pathologic abnormalities were detected to be treatment related

No negative effects were demonstrated on mice body weight



Treatment with unconjugated SB101 & SB201 didn't demonstrate any sign of safety issues

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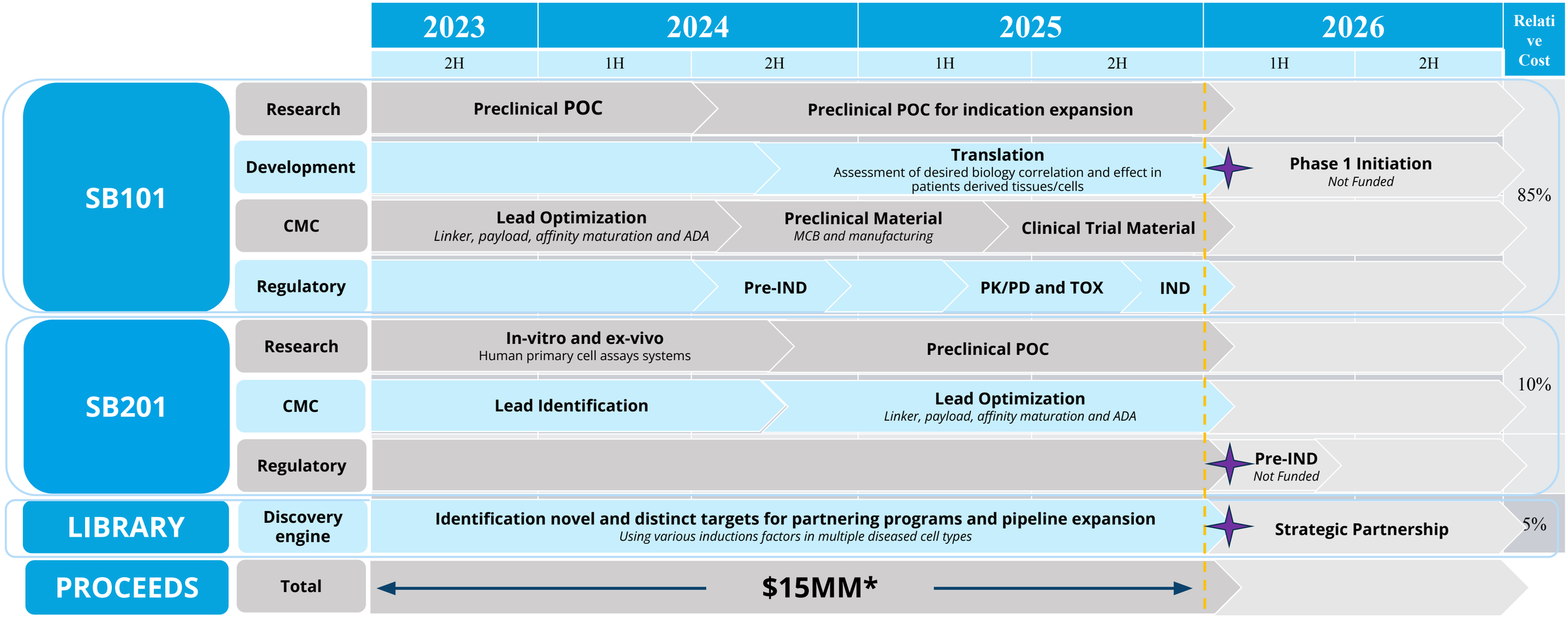
IV – Intravenous
BW – Bodyweight
*SB101 – unconjugated murine Ab
** SB201 -unconjugated murine Ab

Research and Development Plan to First in Human

De-risking strategy to increases the probability for multiple high value inflection points



*Assumes $15MM, less deal expenses

Investment Opportunity

Company

Early-stage biotech harnessing the therapeutic potential of senescence biology to discover and develop breakthrough treatments for multiple debilitating diseases

Differentiation

High throughput proteomic differential analysis discovery engine enabling to develop precision therapeutics by the identification of distinct pathologic SnCs surface targets

Therapeutic Focus

- Therapy induced senescence in cancers
- Age-related diseases

Pipeline

- SB101 – ADC selectively target senescent and proliferating tumor cells
- SB201 – distinctly targeting pathologic relevant-diseases senescent cells

IP

- IP portfolio including CoM
- Proprietary library of targets for senescent cells

Partners

WEIZMANN INSTITUTE OF SCIENCE

CHARLES RIVER LABORATORIES

ABZENA
Enabling better biopharmaceuticals

Key Investor

M. VENTURES

Merck KGaA strategic corporate venture capital fund

Investment

Seed extension of $15M to advance our 2 candidates to substantial inflection points, as well as, strengthening the company's platform and IP portfolio for value generation and strategic growth

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CoM – composition of matter
SnCs – Senescent Cells

Experienced Leadership

Management

DGANIT BAR, PhD
Chief Executive Officer

QUARK Pharmaceuticals · BIOLINERX · ROSETTAGENOMICS™

SHARON ELKOBI, MSc, MBA
Chief Business Officer

Chemomab THERAPEUTICS · MEDISON · teva · Neurim PHARMACEUTICALS

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Director

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ANIQUE ter BRAAKE, PhD
Director

M. VENTURES

Scientific Advisor

PROF. VALERY KRIZHANOVSKY, PhD
Associate Professor, Department of Molecular Cell Biology; a world-renowned expert in senescence field

מכון ויצמן למדע WEIZMANN INSTITUTE OF SCIENCE

Thank You

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