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): June 4, 2024

Aura Biosciences, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**001-40971**	**32-0271970**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**
80 Guest Street **Boston, MA**		**02135**
(Address of principal executive offices)		**(Zip Code)**

Registrant's telephone number, including area code (617) 500-8864

Not Applicable
(Former name or former address, if changed since last report)

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 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))

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. ☐

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trade Symbol(s)**	**Name of each exchange on which registered**
Common Stock, $0.00001 par value per share	AURA	The Nasdaq Global Market

Item 8.01. Other Events.

Aura Biosciences, Inc. (the "Company") will be conducting meetings with investors attending the Jefferies Global Healthcare Conference in New York City, New York beginning on June 5, 2024. The Company updated its corporate presentation for use in these meetings. A copy of the corporate presentation is filed as Exhibit 99.1 for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Forward Looking Statements

Statements contained under this Item 8.01 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 about the initiation, timing, progress, results and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and our research and development programs; our ability to successfully manufacture our drug substances and product candidates for preclinical use, for clinical trials and on a larger scale for commercial use, if approved; the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates; our ability to commercialize our products, if approved; our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates; our ability to obtain and maintain regulatory approval of our product candidates; the size and growth potential of the markets for our product candidates and our ability to serve those markets; our financial performance; our expected cash runway into the second half of 2026; and the implementation of our business model, including strategic plans for our business and product candidates.

Any forward-looking statements are neither promises nor guarantees, and investors should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, many of which are beyond the Company's control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including, without limitation, uncertainties inherent in clinical trials and in the availability and timing of data from ongoing clinical trials; the expected timing for submissions for regulatory approval or review by governmental authorities; the risk that the results of the Company's clinical trials may not be predictive of future results in connection with future clinical trials; the risk that interim data from ongoing clinical trials may not be predictive of final data from completed clinical trials; the risk that governmental authorities may disagree with the Company's clinical trial designs, even where the Company has obtained agreement with governmental authorities on the design of such trials, such as the Phase 3 Special Protocol agreement with the United States Food and Drug Administration; whether the Company will receive regulatory approvals to conduct trials or to market products; whether the Company's cash resources will be sufficient to fund its foreseeable and unforeseeable operating expenses and capital expenditure requirements; the Company's ongoing and planned preclinical activities; and the Company's ability to initiate, enroll, conduct or complete ongoing and planned clinical trials. These risks, uncertainties and other factors include those risks and uncertainties described under the heading "Risk Factors" in the Company's most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed with the U.S. Securities and Exchange Commission ("SEC") and in subsequent filings made by the Company with the SEC, which are available on the SEC's website at www.sec.gov. Except as required by law, the Company disclaims any intention or responsibility for updating or revising any forward-looking statements contained under this Item 8.01 in the event of new information, future developments or otherwise. These forward-looking statements are based on the Company's current expectations and speak only as of the date hereof and no representations or warranties (express or implied) are made about the accuracy of any such forward-looking statements.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Corporate presentation of the Company
104	Cover Page Interactive Data (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.

Date: June 4, 2024

AURA BIOSCIENCES, INC.

By: /s/ Julie Feder
Julie Feder
Chief Financial Officer

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Corporate Presentation
June 2024

Legal Disclosure

This presentation contains forward-looking statements, all of which are qualified in their entirety by this cautionary statement. Many of the forward-looking statements contained herein can be identified by the use of forward-looking words such as "may", "anticipate", "believe", "could', "expect", "should", "plan", "intend", "estimate", "will", "potential" and "ongoing", among others, although not all forward-looking statements contain these identifying words. These forward-looking statements include statements about the initiation, timing, progress, results and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and our research and development programs; our ability to successfully manufacture our drug substances and product candidates for preclinical use, for clinical trials and on a larger scale for commercial use, if approved; the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates; our ability to commercialize our products, if approved; our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates; our ability to obtain and maintain regulatory approval of our product candidates; the size and growth potential of the markets for our product candidates and our ability to serve those markets; our financial performance; our expected cash runway into the second half of 2026; and the implementation of our business model, including strategic plans for our business and product candidates.

Except as otherwise noted, these forward-looking statements speak only as of the date of this presentation, and we undertake no obligation to update or revise any of such statements to reflect events or circumstances occurring after this presentation. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. For a discussion of these and other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section entitled "Risk Factors" in our most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC), as well as discussions of potential risks, uncertainties, and other important factors in our other subsequent filings with the SEC, which are available on the SEC's website at www.sec.gov. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. We caution you not to place undue reliance on the forward-looking statements contained in this presentation.

This presentation discusses product candidates that are under preclinical or clinical evaluation and that have not yet been approved for marketing by the U.S. Food and Drug Administration (FDA) or any other regulatory authority. Until finalized in a clinical study report, clinical trial data presented herein remain subject to adjustment as a result of clinical site audits and other review processes. No representation is made as to the safety or effectiveness of these product candidates for the use for which such product candidates are being studied.

This presentation shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or other jurisdiction.

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Well Positioned with Multiple Near-Term Clinical Catalysts

Precision Therapy Platform

- Direct tumor cell killing and immune activation
- Focal treatment approach to deliver durable response

Late-Stage Clinical Development

- Phase 3 in Primary Uveal Melanoma Ongoing
- FDA SPA[1] Agreement

Large Market Opportunity In Areas of Unmet Need

- Ocular Oncology >60,000 patients/yr (US/EU)[2]
- Urologic Oncology ~500,000 patients/yr (globally)[3]

Key Upcoming Catalysts

- Multiple clinical data readouts expected within next 6-12 months, including early Phase 1 bladder data
- Cash expected to fund operations into 2H 2026

1. Special Protocol Assessment (SPA).
2. See sources on slide 8 of this presentation.
3. Bladder cancer. Putnam & Assoc. Epidemiology Analysis.

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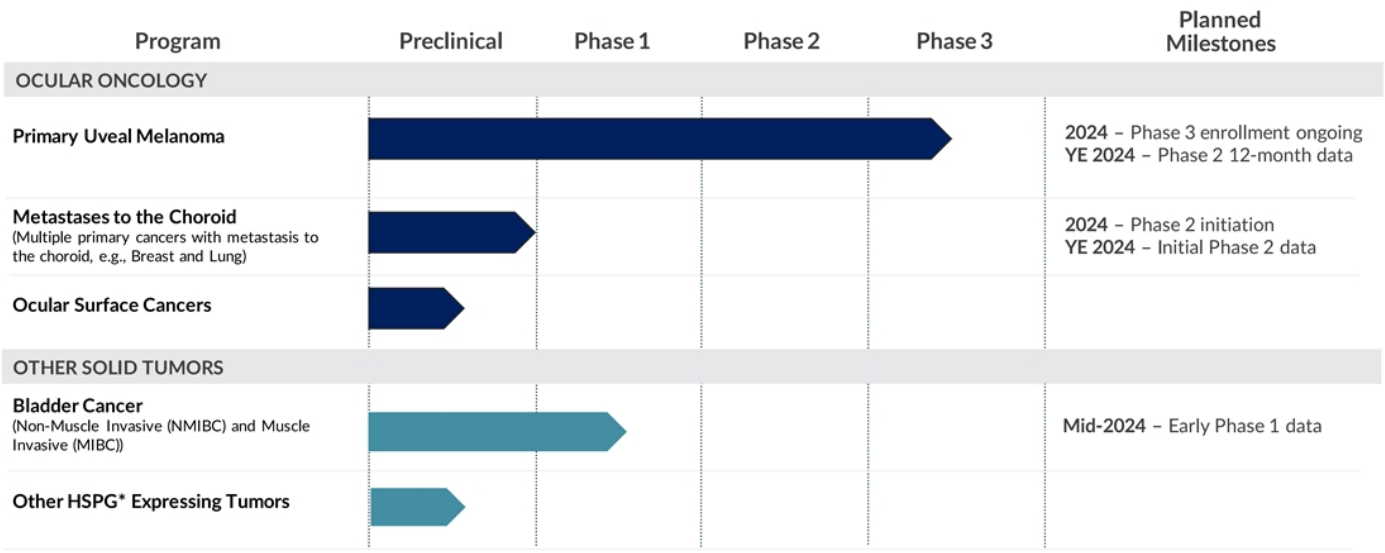
Clinical Pipeline Across Multiple Solid Tumor Indications



*Virus-like drug conjugates (VDCs) bind to a subset of modified tumor associated glycosaminoglycans (GAGs) that are part of the heparan sulphate chain of heparan sulfate proteoglycans (HSPGs). *Schiller et al. Viruses* 2022, 14(8), 1656

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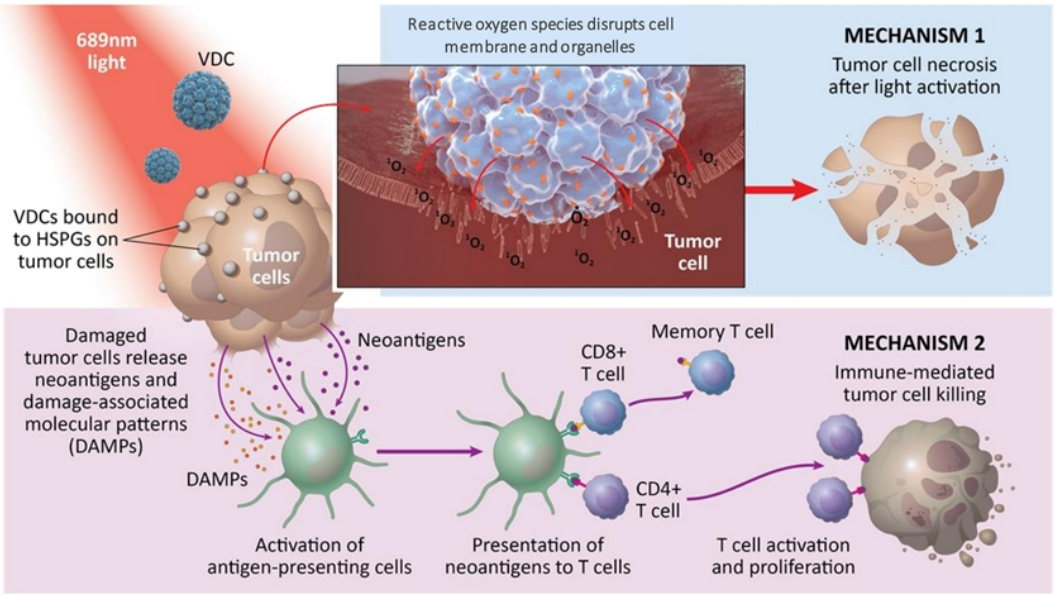
Bel-sar is a Potential First-in-Class Therapy for Multiple Solid Tumors

Bel-sar has a novel dual mechanism of action

Disruption of the tumor cell membrane and pro-immunogenic cell death by necrosis leads to T cell activation and immune-mediated tumor cell killing



Kines RC, et al. *Int J Cancer*. 2016;138(4):901–11. Kines RC, et al. *Mol Cancer Ther*. 2018;17(2):565–74. Kines RC, et al. *Cancer Immunol Res*. 2021;9:693–706.
DAMPs, damage-associated molecular patterns; **HSPG**, heparan sulfate proteoglycan; **VDC**, virus-like drug conjugate; **VLP**, virus-like particle. **Bel-sar**, AU-011

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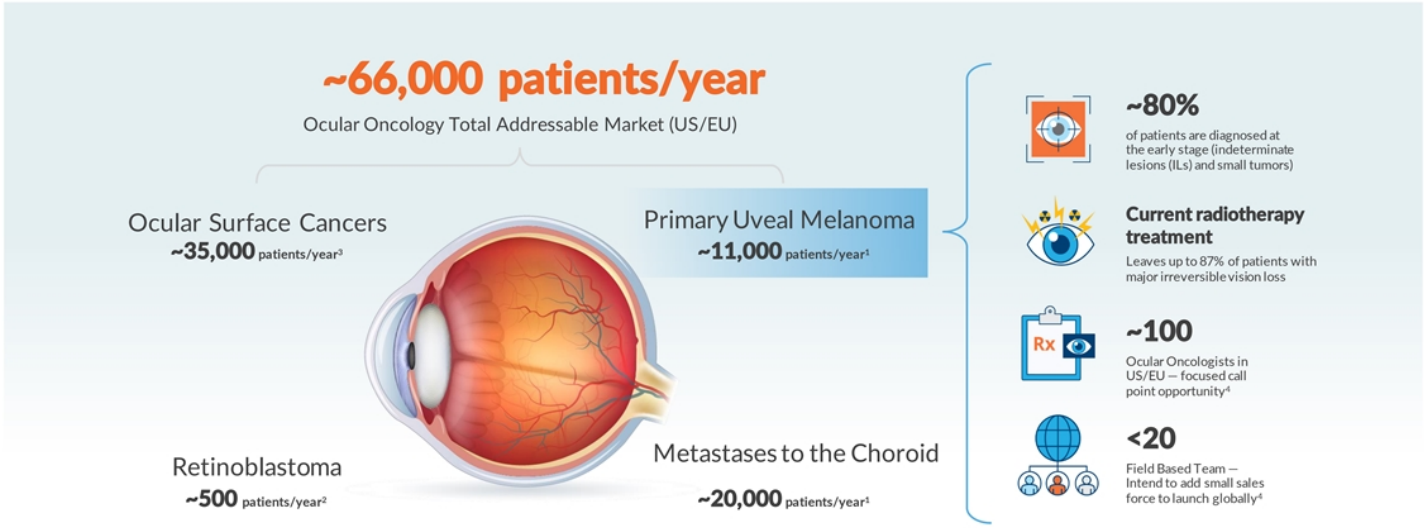
Ocular Oncology Therapeutic Area

Bel-sar

Target Indications:

- Primary Uveal Melanoma
- Metastases to the Choroid
- Ocular Surface Cancers

Bel-sar Opportunities in Ocular Oncology Represent a Multi-billion-dollar Addressable Market



1. ClearView & Putnam & Assoc. Epidemiology Analysis Choroidal Melanoma and Choroidal Metastasis
2. American Cancer Society- Retinoblastoma statistics
3. Includes Conjunctival Melanoma, Primary Acquired Melanosis, Squamous Cell Carcinoma and Ocular Surface Squamous Neoplasia (https://pubmed.ncbi.nlm.nih.gov/12788119/; https://pubmed.ncbi.nlm.nih.gov/19628487/; https://pubmed.ncbi.nlm.nih.gov/8676629/; https://pubmed.ncbi.nlm.nih.gov/29511061/; https://pubmed.ncbi.nlm.nih.gov/9037556/)
4. Bel-sar is an investigational product candidate. Subject to regulatory approval.

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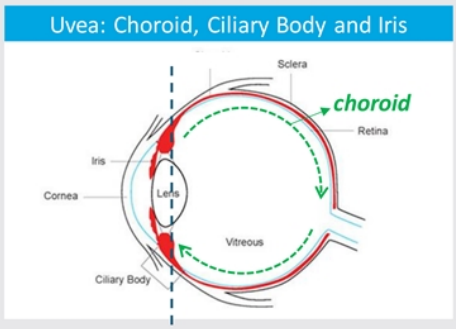
Primary Uveal Melanoma—High Unmet Medical Need

Choroid is 90%
of the uvea[1]

50% of patients develop metastasis within 15 years (metastatic uveal melanoma)[2]



Most common primary intraocular cancer in adults[2]

Impacts **~11,000** patients in US/EU per year[3]

~80% patients diagnosed with **early-stage disease**[3]

Primary Uveal Melanoma is a Rare and Life-Threatening Ocular Cancer with No Drugs Approved

1. Heiting, G. Iris/uvea of the eye. Accessed Oct. 3, 2023. https://www.allaboutvision.com/en-gb/resources/uvea-iris-choroid/
2. Kaliki S, Shields CL. Uveal melanoma: relatively rare but deadly cancer. *Eye* (Lond). 2017;31(2):241-257. doi:10.1038/eye.2016.275
3. Clearview & Putnam & Assoc. Market Research

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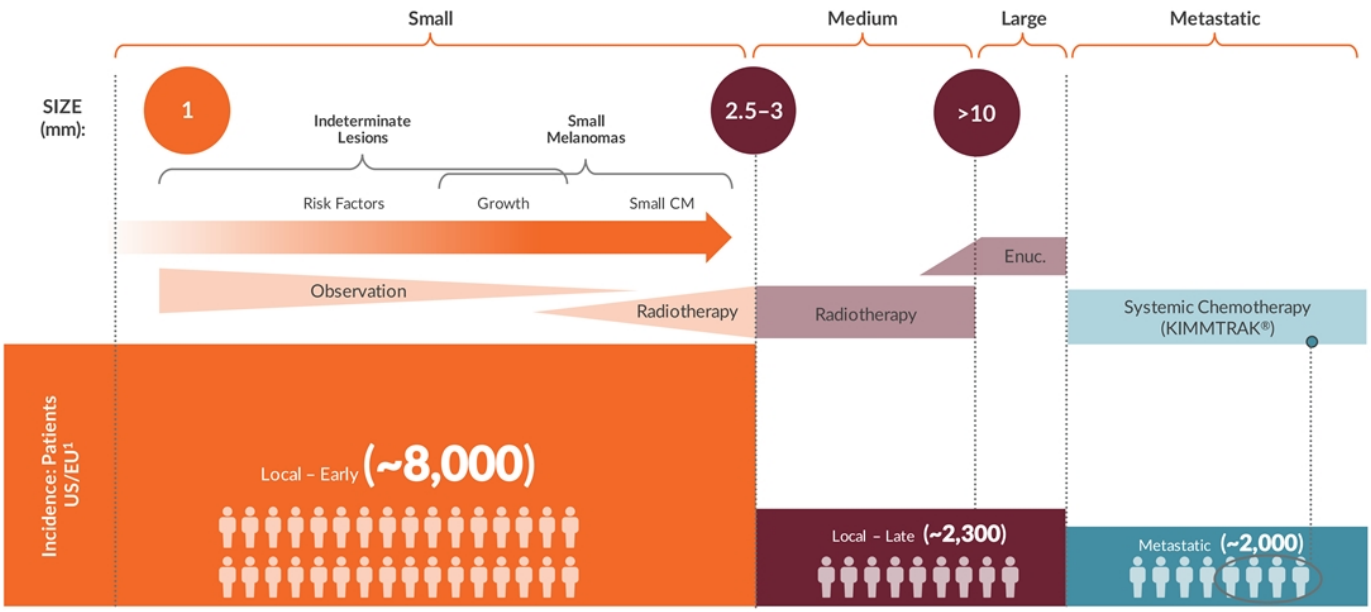
Current Treatment Paradigm for Uveal Melanoma



1. Each figure represents ~250 persons.
Shields CL et al. Choroidal and ciliary body melanoma. Available at: https://eyewiki.aao.org/Choroidal_and_Ciliary_Body_Melanoma. Accessed May 2, 2024.
Epidemiology analysis for choroidal melanoma and choroidal metastasis by ClearView Healthcare Partners and Putman.
Enuc., enucleation. CM, Choroidal Melanoma.

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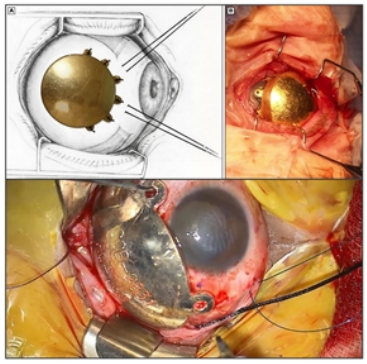
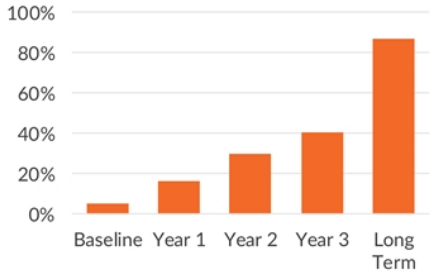
High Morbidity Associated with Current Standard of Care

Up to 87% of Primary Uveal Melanoma Patients Become Legally Blind Over Time in the Eye Treated with Radiotherapy[1,2]





	Radiotherapy[3-7]
Adverse Event	
Surgeries secondary to AEs (e.g., cataracts)	40%+
Radiation retinopathy	40%+
Neovascular glaucoma	10%
Dry eye syndrome	20%
Strabismus	2%+
Retinal detachment	1-2%
Vision loss (≥15 letters)	~70%
Long-term legal blindness (≤20/200)	~90%
Serious Adverse Event	
Scleral necrosis	0-5%
Enucleation/eye loss	10-15%
Severe vision loss (≥30 letters) in HRVL	~90%

1. Jarczak J, Karska-Basta I, Romanowska-Dixon B. Deterioration of visual acuity after brachytherapy and proton therapy of uveal melanoma, and methods of counteracting this complication based on recent publications. *Medicina* (Kaunas). 2023;59(6):1131. 2. Tsui I, Beardsley RM, McCannel TA, Oliver SC, et al. Visual acuity, contrast sensitivity and color vision three years after iodine-125 brachytherapy for choroidal and ciliary body melanoma. *Open Ophthalmol J*. 2015;9:131-5. 3. Shields CL et al. Arch Ophthalmol. 2000;118(9):1219-1228. 4. Peddada KV et al. J Contemp Brachytherapy. 2019;11(4):392-397. 5. Jarczak J et al. Medicina (Kaunas). 2023;59(6):1131. 6. Shields CL et al. Curr Opin Ophthalmol. 2019;30(3):206-214. 7. Kaliki S, Shields CL. Eye 2017;31(2):241-257. AE, adverse event; BCVA, best-corrected visual acuity; HRVL, high-risk for vision loss.

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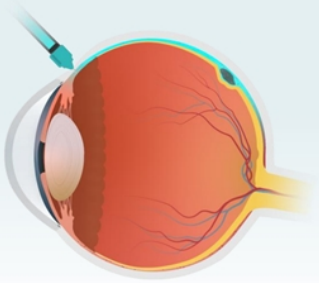
Bel-sar has the Potential to be the First Approved Therapy in Primary Uveal Melanoma

Bel-sar is Delivered by Simple Suprachoroidal Injection



Two ~2 minute Injections

Light Activation with Standard Ophthalmic Laser

Two ~5 minute Lasers

In-Office Procedure

Goals of Treatment

- Local tumor control
- Preservation of vision
- No radiation-related morbidity
- Opportunity to treat early and reduce risk of metastases
- Improvement in safety and quality of life

Bel-sar is an investigational product candidate. Subject to regulatory approval.

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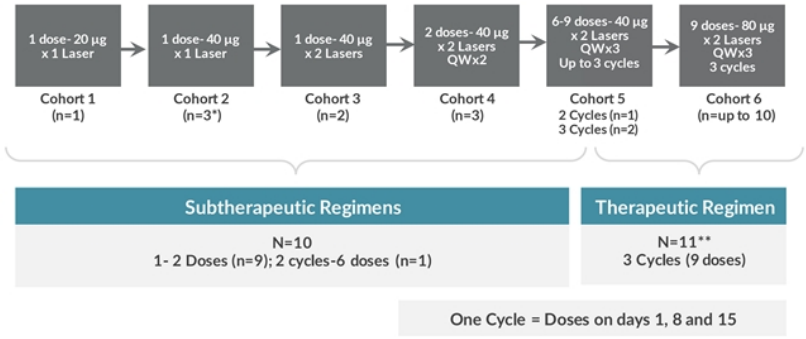
Phase 2 Trial – Dose Escalation and Expansion with Suprachoroidal Administration

Patient Population Representative of Early-Stage Disease: Small Choroidal Melanoma and Indeterminate Lesions

Endpoint	Endpoint Definitions
Tumor Progression	Growth in Tumor Height ≥0.5mm or ≥1.5 mm in Largest Basal Diameter (LBD)
Visual Acuity Loss	Decrease from Baseline: ≥15 letters
Tumor Thickness Growth Rate	Change in Rate of Growth of Tumor Thickness

Trial Design – Enrollment Complete (n=22)



Subtherapeutic Regimens	Therapeutic Regimen
N=10 1- 2 Doses (n=9); 2 cycles-6 doses (n=1)	N=11** 3 Cycles (9 doses)

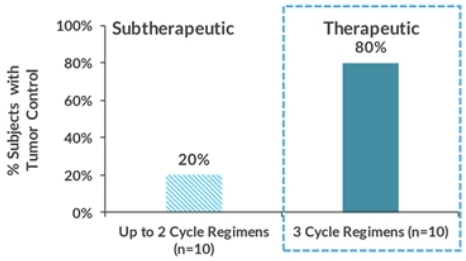
One Cycle = Doses on days 1, 8 and 15

Goal: To Determine Safety, Optimal Dose and Therapeutic Regimen with Suprachoroidal Administration

*Cohort 2: 2 subjects were planned; third subject was additionally enrolled due to dose error in 1 subject
**12 patients enrolled, 1 subject who discontinued after 1 cycle due to unrelated SAEs is not included in data analysis (n=11). Data that follows will be based on a cohort of 11
ClinicalTrials.gov Identifier: NCT04417530 ; AU-011-202

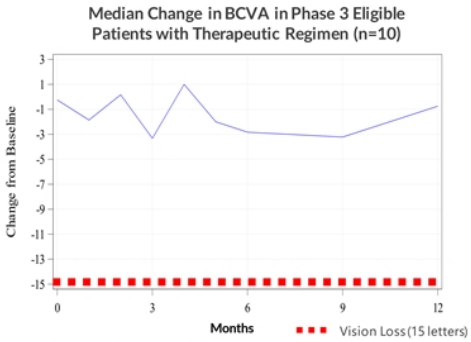
Phase 2 Interim Data Demonstrates Tumor Control, Vision Preservation and an Excellent Safety Profile

80% Tumor Control Rate



Tumor Progression: change from baseline in thickness ≥0.5mm; or in LBD ≥1.5mm confirmed by at least one repeat assessment
August 3, 2023, data on file Aura Biosciences

90% Visual Acuity Preservation Rate



Vision acuity loss definition based on ETDRS BCVA letter score (≥ 15 letters from baseline)

<20% Grade 1 AEs

Ongoing Ph 2 Safety Outcomes with SC Administration

All Treated Subjects (n=22) Drug/Laser Related Adverse Events >5% Subjects*	Grade I	Grade II	Grade III	Total
Anterior Chamber Inflammation	18%	0	0	18%
Anterior Chamber Cell	9%	0	0	9%
Eye Pain	9%	0	0	9%

Table presents percentage of subjects with AEs related to bel-sar or laser by severity and overall; subjects with more than 1 AE are counted in the highest severity group
*Treatment-emergent AEs related to bel-sar or laser in 1 patient each or <5% (anisocoria, conjunctival edema, cystoid macular edema, pupillary reflex impaired, retinal pigment epithelopathy, salivary gland enlargement)

August 3, 2023, data on file Aura Biosciences

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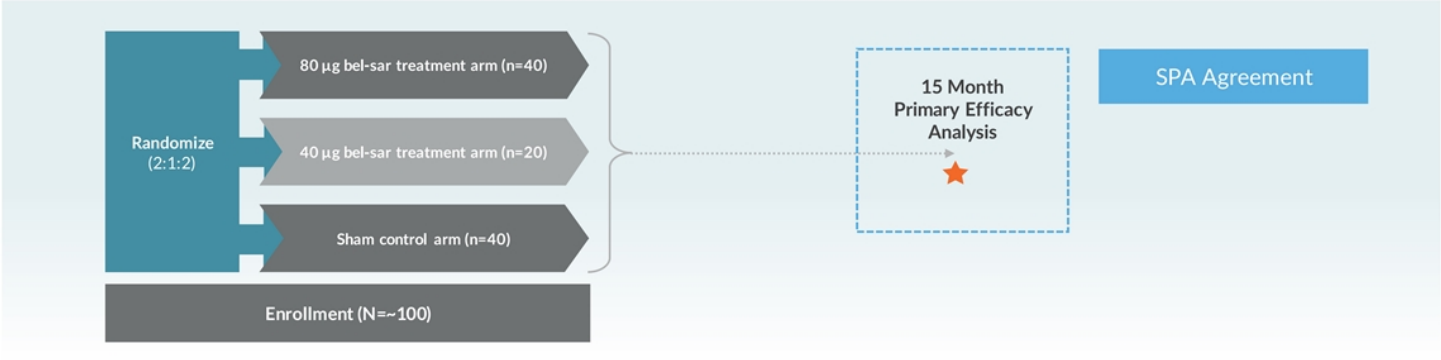
SPA Agreement with FDA Supports Global Phase 3 Trial Design

Fast Track and Orphan Drug Designations



Primary Endpoint

- Time to Tumor Progression

First Key Secondary Endpoint

- Time to Composite Endpoint: Tumor Progression or Visual Acuity Failure

An SPA Indicates Concurrence by the FDA that the Design of the Trial can Adequately Support a Regulatory Submission

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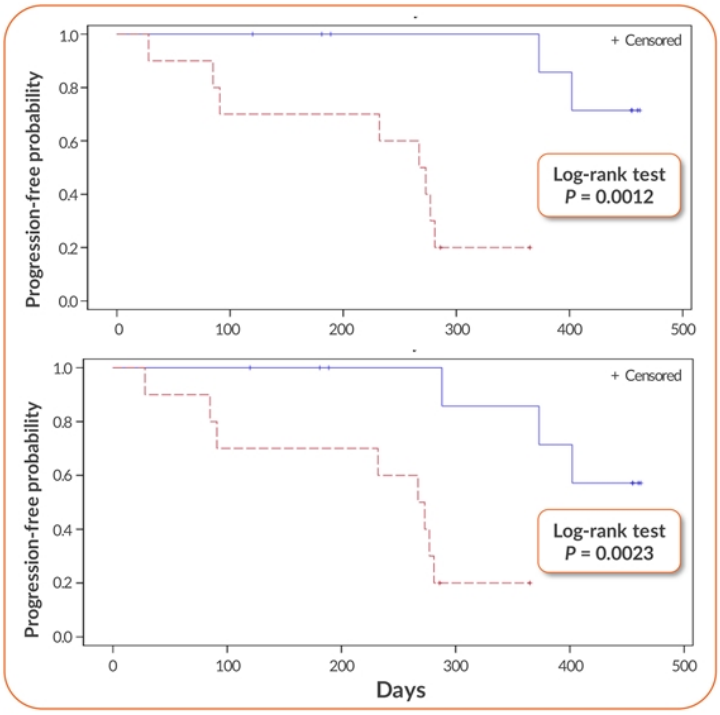
Kaplan-Meier analysis simulation of Phase 2 interim data support assumptions for the potential success of Phase 3 trial with high statistical significance

Time to tumor progression

Change from baseline in thickness ≥0.5 mm or in LBD ≥1.5 mm confirmed by at least one repeat assessment

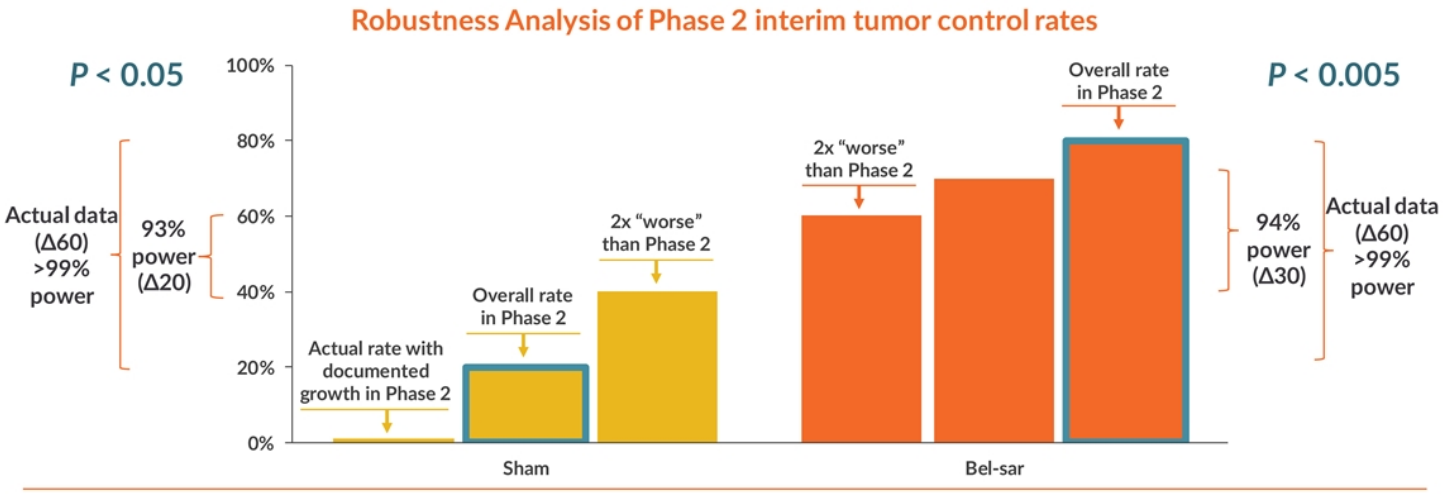
Time to composite endpoint

Time to tumor progression or vision acuity failure (≥15 letter loss in ETDRS-BCVA), whichever occurs earlier



Study duration 12 months. Participants either had an event or were censored at the last visit; some had their Week 52 visit after 365 days. Any events at the final visit are assigned to the actual time of that visit. Log-rank test p-value based on unsimulated original Kaplan-Meier curves. **BCVA**, best-corrected visual acuity; **ETDRS**, Early Treatment Diabetic Retinopathy Study; **LBD**, largest basal diameter. August 3, 2023 data on file, Aura Biosciences. ClinicalTrials.gov Identifier: NCT04417530; AU-011-202.

Phase 2 Interim Data Support Phase 3 Assumptions



Phase 3 trial design

Same dose, regimen, route of administration, range of tumor sizes and reading center as Phase 2 trial

- Similar population to Phase 2 participants receiving the therapeutic regimen
- Enriching for early documented growth; Phase 3 randomization stratified by growth rate

ClinicalTrials.gov Identifier: NCT06007690; AU-011-301.

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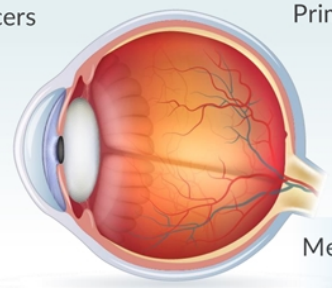
Bel-sar Opportunities in Ocular Oncology Represent a Multi-billion-dollar Addressable Market

~66,000 patients/year

Ocular Oncology Total Addressable Market (US/EU)

Ocular Surface Cancers
~35,000 patients/year[3]

Primary Uveal Melanoma
~11,000 patients/year[1]



Retinoblastoma
~500 patients/year[2]

Metastases to the Choroid
~20,000 patients/year[1]

Majority originate from breast and lung cancer

Burdensome Standard of Care with Radiation Morbidities

Daily treatments of radiotherapy for 4 weeks

~100

Ocular Oncologists in US/EU — focused call point opportunity[4]

<20

Field Based Team — Intend to add small sales force to launch globally[4]

1. ClearView & Putnam & Assoc. Epidemiology Analysis Choroidal Melanoma and Choroidal Metastasis
2. American Cancer Society- Retinoblastoma statistics
3. Includes Conjunctival Melanoma, Primary Acquired Melanosis, Squamous Cell Carcinoma and Ocular Surface Squamous Neoplasia (https://pubmed.ncbi.nlm.nih.gov/12788119/; https://pubmed.ncbi.nlm.nih.gov/19628487/; https://pubmed.ncbi.nlm.nih.gov/8676629/; https://pubmed.ncbi.nlm.nih.gov/29511061/; https://pubmed.ncbi.nlm.nih.gov/9037556/)
4. Bel-sar is an investigational product candidate. Subject to regulatory approval.

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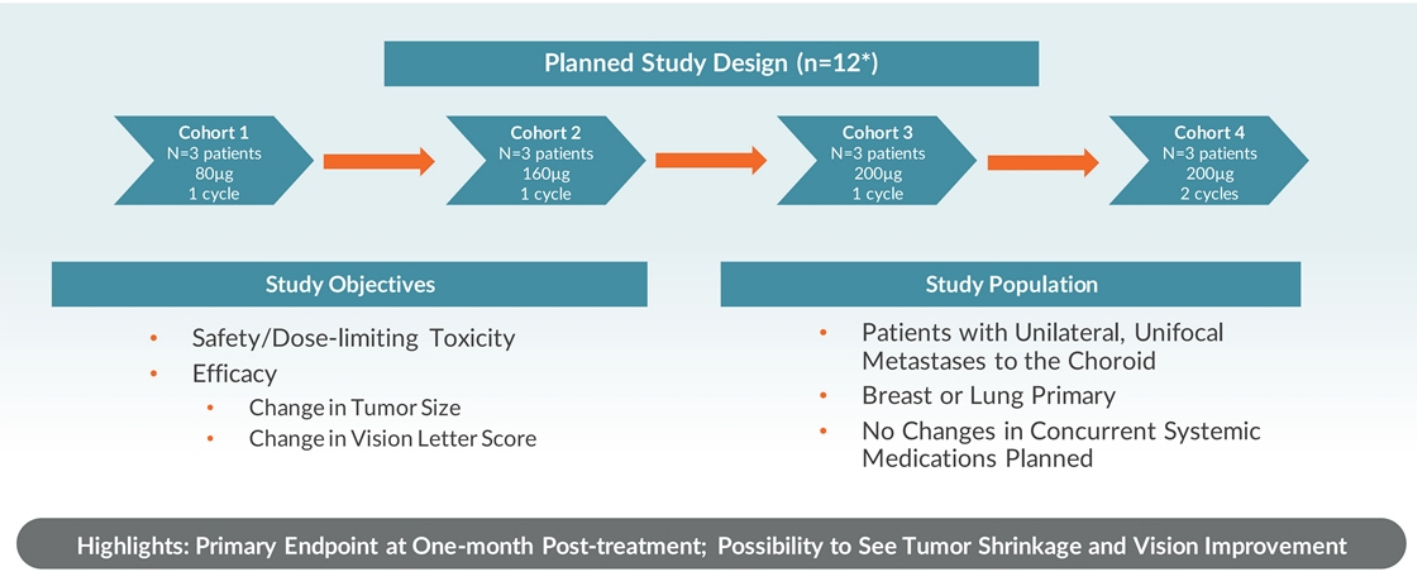
Metastases to the Choroid – Phase 2 Trial Expected to Begin in 2024



Highlights: Primary Endpoint at One-month Post-treatment; Possibility to See Tumor Shrinkage and Vision Improvement

*3+3 Design. Each cohort to have a minimum of 3 and a maximum of 6 patients.

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Urologic Oncology Therapeutic Area

Bel-sar

Target Indications:

- Non-muscle invasive bladder cancer
- Muscle invasive bladder cancer

Bladder Cancer is a Global High Unmet Medical Need

~500,000

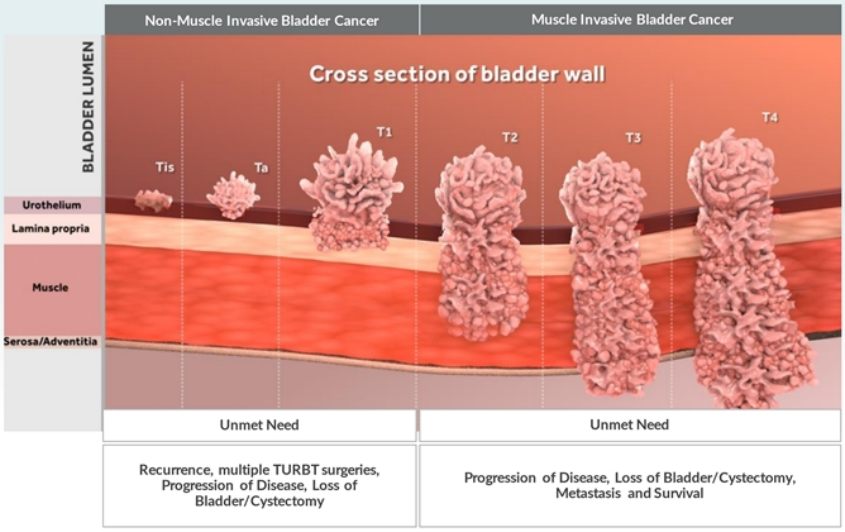
New cases/ year globally[1]

>200,000 NMIBC

New cases/year US, Europe & Asia[1]

>60,000 MIBC

New cases/year US, Europe & Asia[1]



1. Bladder cancer. Putnam & Assoc. Epidemiology Analysis.

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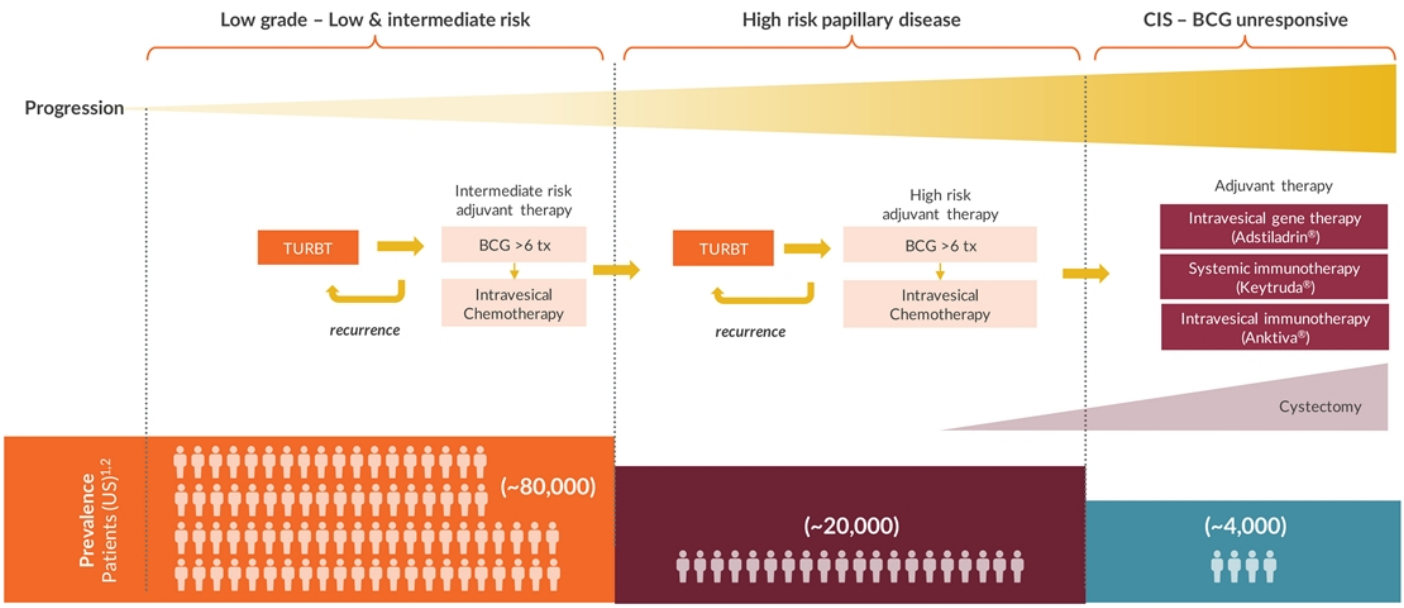
Current Treatment Paradigm for Non-Muscle Invasive Bladder Cancer



1. Each figure represents 1000 persons.
2. Holzbeierlein JM et al. *J Urol.* 2024 Apr 25:101097JU0000000000003981 [epub ahead of print]. Holzbeierlein JM et al. *J Urol.* 2024 Apr;211(4):533-538. Internal Aura epidemiology of market size data on file.

BCG, Bacillus Calmette-Guérin; **TURBT**, transurethral resection of the bladder.

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Bel-sar as Potential Front-Line Therapy in NMIBC may be Optimized for In Office-based Procedure

Bel-sar's Local Administration Aligned with Current Urologic Oncology Practice

- No Virus Replication or Viral Shedding
- Lasers and Bladder Injections (e.g. Botox) are Commonly Used

Goals of Treatment with Bel-sar

- Focal Treatment with Direct Tumor Cell Killing
- Stimulate Anti-tumor Specific T Cell Response
- Reduce Risk of Recurrence
- Avoid TURBT /Operating Room

Bel-sar has a Dual Mechanism of Action and its Local Administration is Aligned with Clinical Practice

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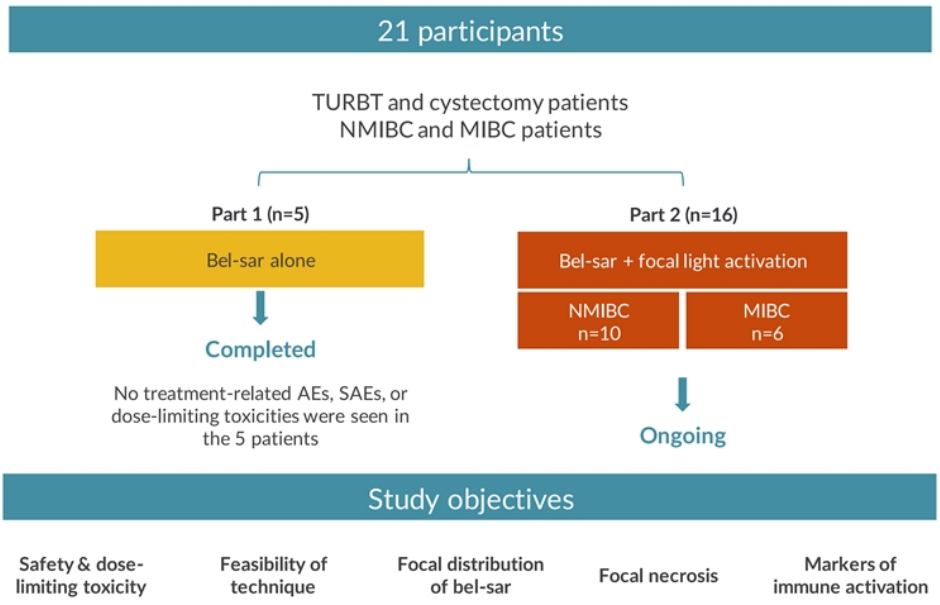
Phase 1 trial for bladder cancer designed to evaluate safety, feasibility and MoA



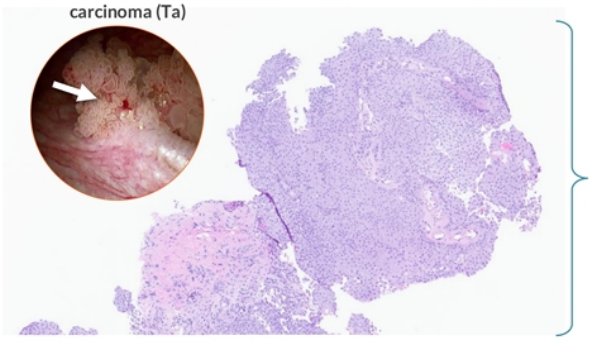
Study objectives

- Safety & dose-limiting toxicity
- Feasibility of technique
- Focal distribution of bel-sar
- Focal necrosis
- Markers of immune activation

AE, adverse event; **MIBC,** muscle invasive bladder cancer; **MoA,** mechanism of action; **NMIBC,** non–muscle invasive bladder cancer; **SAE,** serious adverse event; **TURBT,** transurethral resection of bladder tumor.
Clinicaltrials.gov identifier: NCT05483868; AU-011-102.

Clinical Complete Response with Immune Activation after Single Dose Confirmed by Histopathology in Part 2 First Patient

Example of papillary carcinoma (Ta)



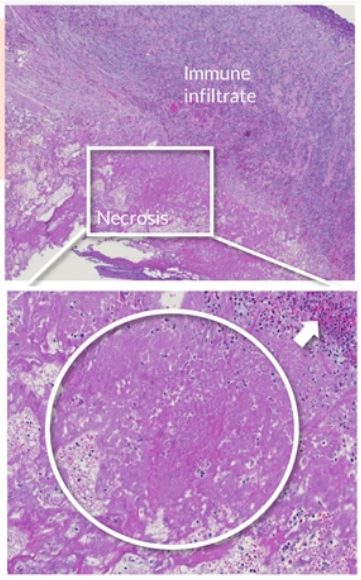
H&E stain

Pre-injection bladder biopsy demonstrating low-grade papillary urothelial carcinoma; non-invasive.

Papillary urothelial carcinoma

7 days after bel-sar treatment

Evidence of complete response by absence of tumor cells, as well as immune activation, after single dose treatment in first patient



Post-treatment TURBT demonstrating necrosis, inflammatory infiltrate, and no residual carcinoma. Circled region shows area of necrosis; arrow indicates edge of inflammatory infiltrate.

H&E, hematoxylin and eosin; **TURBT**, transurethral resection of the bladder. Clinicaltrials.gov identifier: NCT05483868; AU-011-102.

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Company Highlights

Ocular Oncology Therapeutic Area

- **Primary Uveal Melanoma** – Global Phase 3 CoMpass Trial:
  - Trial actively enrolling
  - Special Protocol Assessment (SPA) Agreement with FDA
  - Phase 3 assumptions supported by Phase 2 data
- **Metastases to the Choroid** – Phase 2 trial planned to initiate in 2024
  - Second ocular indication potentially doubles market opportunity[1]
  - Initial data expected by year end 2024

Urologic Oncology Therapeutic Area

- **Bladder Cancer** – Phase 1 Trial
  - Clinical complete response in first patient with single dose
  - Early data expected mid-year 2024

Corporate

- Strong cash position – expected to fund operations into 2H 2026
- Experienced leadership team across functions

1. ClearView & Putnam & Assoc. Epidemiology Analysis Choroidal Melanoma and Choroidal Metastasis.

Bel-sar is an investigational product candidate. Subject to regulatory approval.

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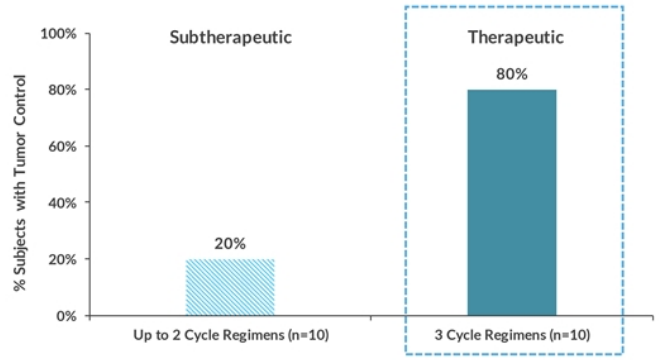
Appendix:

Phase 2 Primary Uveal Melanoma Trial – Interim Data

High Local Complete Response Rate at 12 months Follow-up*

Dose Response: Subtherapeutic vs Therapeutic Regimen



Tumor Progression: change from baseline in thickness ≥0.5mm; or in LBD ≥1.5mm confirmed by at least one repeat assessment
August 3, 2023, data on file Aura Biosciences

>90% Completed 12 Months

Dose/Regimen	Total Patients (n)	Tumor Control Rate
Subtherapeutic Regimens		
Single dose up to 2 cycles	10	20% (2/10)
Therapeutic Regimen		
3 Cycles (n=11)	11	73% (8/11)
3 Cycles and Phase 3 eligible (n=10)*	10	80% (8/10)

* One subject with circumpapillary tumor that did not meet Phase 3 criteria is not included

High Tumor Control Rates with Therapeutic Regimen in Phase 3 Eligible Patients with Active Growth

*A local complete response, or CR, in early-stage choroidal melanoma is described as tumor control and complete arrest of tumor growth by ocular oncologists.
Based on Phase 2 interim data, August 3, 2023.

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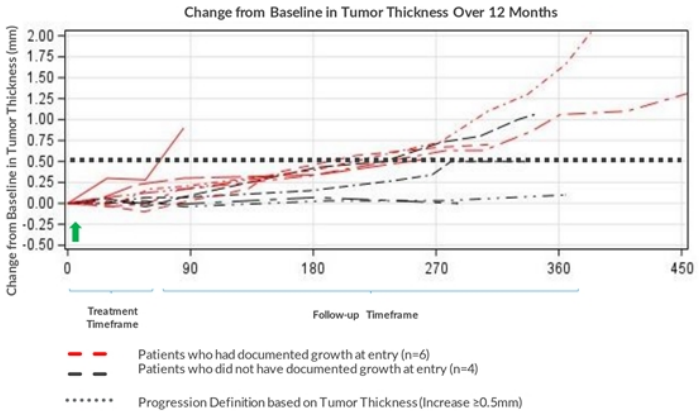
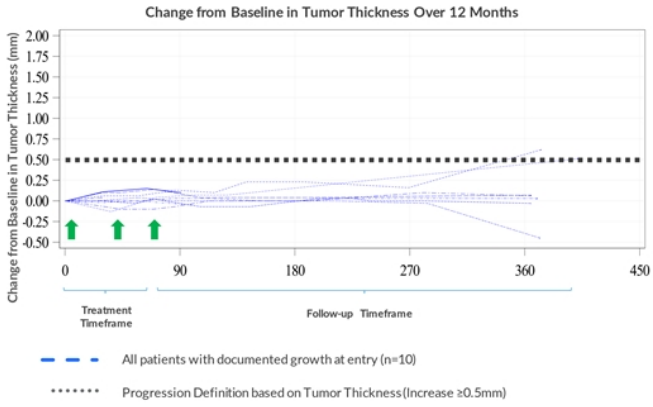
High Tumor Control Rates Observed in Phase 3 Population Treated with Therapeutic Regimen in Phase 2*

Subtherapeutic Regimens (n=10)



Active Growth and 3 Cycle Regimens (n=10)



August 3, 2023, data on file Aura Biosciences

Phase 2 Interim Data Demonstrated Tumor Control Rate of 80%, with 90% of Patients at 12 Months of Follow Up

*Based on Phase 2 interim data, August 3, 2023.

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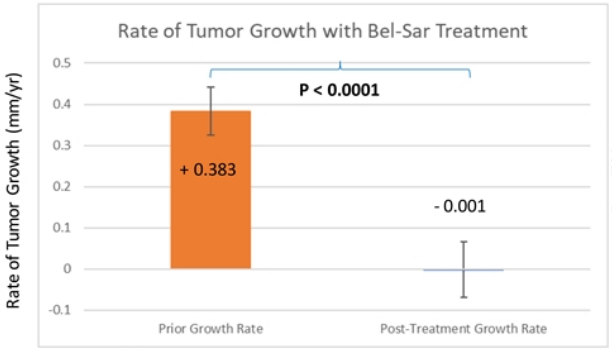
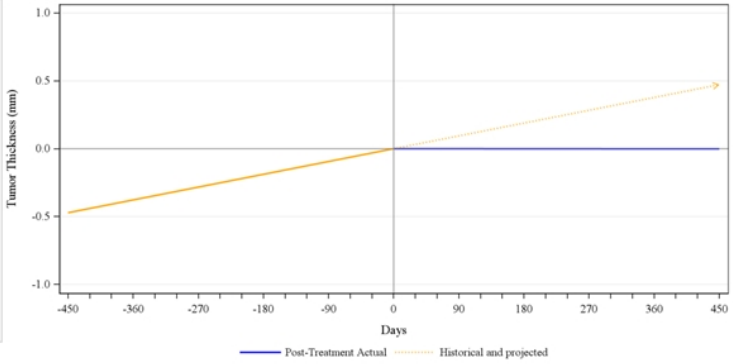
Phase 2 Interim Data Demonstrated Complete Cessation of Growth Among Responders

Successful Treatment with 3 Cycle Regimen in Phase 3 Eligible Tumors with Active Growth Change in Tumor Growth (mm/yr) (n=8)





August 3, 2023, data on file Aura Biosciences
Tumor thickness growth rates/ slopes estimated using Mixed Models for Repeat Measures (random intercept and slope model for Historical and Study periods)

Interim Data Showed Negative Growth Rate Among Responders in Planned Phase 3 Population (P <0.0001)

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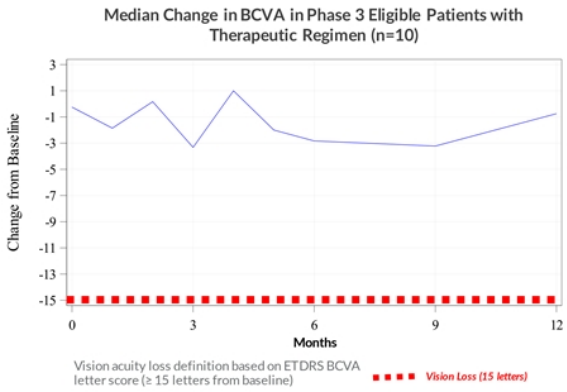
90% Visual Acuity Preservation Despite 80% of These Phase 2 Patients Being at High Risk for Vision Loss*

>90% Patients Completed 12 months



Populations	Total Patients (n)	Vision Failures (n)	Vision Preservation Rate
All Dose Cohorts			
All Treated Patients	22	1	96%
Subtherapeutic			
Single dose up to 2 cycles	10	0	100%
Therapeutic Regimens			
3 Cycles (n=11)	11	1	91%
3 Cycles and Phase 3 eligible (n=10)*	10	1	90%

*One subject with circumpapillary tumor that doesn't meet Phase 3 criteria is not included

August 3, 2023, data on file Aura Biosciences

90% Visual Acuity Preservation Data Supports Potential to be Front Line Therapy for Early-Stage Disease

*Based on Phase 2 interim data, August 3, 2023.

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Phase 2 Interim Safety Data Supports Potential to be First Line Treatment in Primary Uveal Melanoma

Ongoing Phase 2 Safety Outcomes with SC Administration				
All Treated Subjects (n=22) Drug/Laser Related Adverse Events >5% Subjects*	**Grade I**	**Grade II**	**Grade III**	**Total**
Anterior Chamber Inflammation	18%	0	0	18%
Anterior Chamber Cell	9%	0	0	9%
Eye Pain	9%	0	0	9%

Table presents percentage of subjects with AEs related to bel-sar or laser by severity and overall; subjects with more than 1 AE are counted in the highest severity group
*Treatment-emergent AEs related to bel-sar or laser in 1 patient each or <5% (anisocoria, conjunctival edema, cystoid macular edema, pupillary reflex impaired, retinal pigment epitheliopathy, salivary gland enlargement)

August 3, 2023, data on file Aura Biosciences

Adverse Event	Radiotherapy*	Bel-Sar+
Surgeries secondary to AEs+ (e.g., Cataracts)	40%+	0%
Radiation Retinopathy	40%+	0%
Neovascular Glaucoma	10%	0%
Dry Eye Syndrome	20%	0%
Strabismus	2%+	0%
Retinal Detachment	1-2%	0%
Vision Loss (≥15 letters)	~70%	~5%
Serious Adverse Event	**Radiotherapy***	**Bel-Sar+**
Scleral Necrosis	0-5%	0%
Enucleation/Eye Loss	10-15%	0%
Severe Vision Loss (≥30 letters) in HRVL**	~90%	0%++

* Certain data in this presentation are based on a cross-trial comparisons and are not based on any head-to-head clinical trials. Cross-trial comparisons are inherently limited and may suggest misleading similarities or differences. Results of head-to-head comparisons may differ significantly from those set forth herein.
+Related to bel-sar or laser
**73% (16/22) of patients in Phase 2 SC trial were at high risk for vision loss

No Posterior Inflammation, No SAEs and No Grade 3 Related Adverse Events

*J. Contemp Brachytherapy. J. 2019 Aug; 11(4): 392–397.; Arch Ophthalmol. 2000;118(9):1219-1228; Curr. Opin. Ophthalmol. 2019 May;30(3):206-214; Eye 2017 Feb;31(2):241-257
**High-Risk Vision Loss (HRVL) are those subjects with tumors <3mm to fovea or optic nerve
AEs – Adverse Events; SAEs – Serious Adverse Events; SC - Suprachoroidal

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