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): September 27, 2024

Olema Pharmaceuticals, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-39712**	**30-0409740**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**
780 Brannan Street **San Francisco, California** **(Address of Principal Executive Offices)**		**94103** **(Zip Code)**

Registrant's Telephone Number, Including Area Code: 415 651-3316

N/A
(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))

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

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

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

Emerging growth company ☐

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

Item 7.01 Regulation FD Disclosure.

On September 27, 2024, Olema Pharmaceuticals, Inc. (the "Company" or "Olema") posted a corporate presentation to its website that will be shared with investors and others from time to time. A copy of this presentation is being furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in Exhibit 99.1 attached hereto is intended to be furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 8.01 Other Events.

The Company plans to present non-clinical data for OP-3136, the Company's development candidate targeting KAT6, at the EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics ("ENA"), which will be held October 23-25, 2024. An initial new drug ("IND") application for OP-3136 is anticipated to be submitted in the fourth quarter of 2024 and the Phase 1/2 clinical study for OP-3136 is anticipated to begin in 2025.

The Company is also planning for a potential initiation of OPERA-02, a proposed Phase 3 clinical trial of palazestrant in combination with a CDK4/6 inhibitor, ribociclib, in 2025.

Forward Looking Statements

Statements contained in this Current Report on Form 8-K, including the exhibit furnished herewith, regarding matters that are not historical facts are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Words such as "anticipate," "expect," "will," "may," "goal," "potential" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. These forward-looking statements include, without limitation, statements regarding upcoming data presentations, the timing and likelihood of submitting an IND application for OP-3136, the timing of the commencement of a Phase 1/2 clinical study for OP-3136, and the timing and likelihood of initiation of OPERA-02. Because such statements deal with future events and are based on Olema's current expectations, they are subject to various risks and uncertainties, and actual results, performance or achievements of Olema could differ materially from those described in or implied by the statements in this press release. These forward-looking statements are subject to risks and uncertainties, including, without limitation, those discussed in the section titled "Risk Factors" in Olema's Quarterly Report on Form 10-Q for the quarter ended June 30, 2024, and other filings and reports that Olema makes from time to time with the U.S. Securities and Exchange Commission. Except as required by law, Olema assumes no obligation to update these forward-looking statements, including in the event that actual results differ materially from those set forth in the forward-looking statements.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Corporate Presentation, dated September 27, 2024, of Olema Pharmaceuticals, Inc.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

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

OLEMA PHARMACEUTICALS, INC.

Date: September 27, 2024

By: /s/ Shane Kovacs
Shane Kovacs
Chief Operating and Financial Officer

Olema ONCOLOGY

Corporate Overview

Advancing medicines for breast cancer and beyond

September 2024

Forward-looking statements

This presentation contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Statements in this presentation that are not statements of historical fact are forward-looking statements. Words such as “anticipate,” “believe,” “estimate,” “expect,” “goal,” “intend,” “may,” “plan,” “potential,” “project,” “will,” and similar expressions are intended to identify forward-looking statements, though not all forward-looking statements necessarily contain these identifying words. Such forward-looking statements include, without limitation, statements regarding our research and clinical development plans, the scope, progress, results and costs of developing our product candidates or any other future product candidates, strategy, market size and opportunity, clinical trial designs, regulatory matters, including the timing and likelihood of success of obtaining drug approvals, the timelines for potential clinical study results and clinical trials of palazestrant (OP-1250) as a monotherapy and in combination trials, including OPERA-01, the Company’s pivotal Phase 3 monotherapy clinical trial, and OPERA-02, the Company's potential pivotal Phase 3 clinical trial of palazestrant in combination with ribociclib, the timelines for potential commercial launch and related preparatory work, the sufficiency and potential beneficial characteristics, profile, safety, tolerability, efficacy and therapeutic effects of palazestrant as a monotherapy and in combination trials, the potential of palazestrant to become a therapeutic leader and a best-in-class treatment option for ER+/HER2- metastatic breast cancer and a backbone therapy for women living with breast cancer and beyond, the combinability of palazestrant with other drugs, the timelines for potential preclinical studies and clinical trials for our KAT6 inhibitor program, including OP-3136, the potential value and impact of a KAT6 inhibitor program, the best-in-class potential for OP-3136, the potential beneficial characteristics, profile, safety, efficacy, tolerability, and therapeutic effects of OP-3136, our ability to complete certain milestones, our financial condition, our opportunity in breast cancer and beyond, our ability to impact treatment for endocrine-driven cancers, cash position and runway and sufficiency of our financial resources, and the sufficiency and expertise of our management team. These forward-looking statements are based on the beliefs of the Company’s management as well as assumptions made by and information currently available to the Company. Such statements reflect the current views of the Company with respect to future events and are subject to known and unknown risks, including business, regulatory, economic and competitive risks, uncertainties, contingencies and assumptions about the Company, including, without limitation, risks inherent in developing products and technologies, future results from the Company’s ongoing and planned clinical trials, the Company’s ability to obtain adequate financing to fund its planned clinical trials and other expenses, trends in the industry, the legal and regulatory framework for the industry and future expenditures, and other risks and uncertainties affecting the Company, including those described under the caption "Risk Factors" and elsewhere in the Company's Quarterly Reports on Form 10-Q, Annual Report on Form 10-K, and other filings and reports the Company files with the Securities and Exchange Commission from time to time. In light of these risks and uncertainties, the events or circumstances referred to in the forward-looking statements may not occur. The actual results may vary from the anticipated results and the variations may be material. These forward-looking statements should not be taken as forecasts or promises nor should they be taken as implying any indication, assurance or guarantee that the assumptions on which such forward-looking statements have been made are correct or exhaustive or, in the case of the assumptions, fully stated in this presentation. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date this presentation is given.

This presentation discusses product candidates that are under clinical study and which have not yet been approved for marketing by the U.S. Food and Drug Administration. 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 incorporates publicly-available third-party data that we have not independently verified. There are risks inherent in conducting cross-trial comparisons and the results should be interpreted with caution. The presentation of such third-party data does not represent a head-to-head comparison of how palazestrant, in monotherapy or in combination, or OP-3136 performed against any other third-party drug candidate or study. Rather, such third-party data has been pulled by us from publicly-available sources for supplemental informational purposes, only. We caution you that any comparisons against third-party data set forth herein should not be viewed as a side-by-side comparison, and you should not rely on the completeness or accuracy of our presentation of the results of any third-party drug candidate in these slides, due to differences in study design, how other companies quantify or qualify eligibility criteria, and how results are recorded, among other distinguishing factors and uncertainties. Because we may be unaware of or may not adequately present various distinguishing factors and uncertainties, the comparisons set forth herein may not properly present such third-party data, which may differ materially from the data as presented here. Investors are encouraged to independently review third party data and should not rely on our presentation of such data (including any such data placed in comparison with the performance of palazestrant) as a single measure to evaluate our business.

The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of such products.

— We are on a mission to elevate patient care in breast cancer and beyond

Molecular Advantage

Expertise in endocrine-driven cancers with mechanistically superior scientific approach that fully inactivates estrogen receptors

Lead Asset – Palazestrant

OP-1250, a promising backbone therapy for ER+/HER2- breast cancer in late-stage clinical development, forms basis of breast cancer program

OP-3136 Expands Pipeline

Exciting new and potent KAT6 inhibitor with potential to significantly impact breast cancer treatment; IND filing expected in Q4 2024

Proven Leadership

Management and Board with deep expertise developing and commercializing oncology medicines

Olema ONCOLOGY

What drives us: we are all impacted by breast cancer

The most common cancer diagnosed and the second leading cause of cancer death among women

1 in 8

Women in the U.S. will be diagnosed with invasive breast cancer in her lifetime

311k

Estimated women in the U.S. that will be diagnosed with breast cancer in 2024

42k

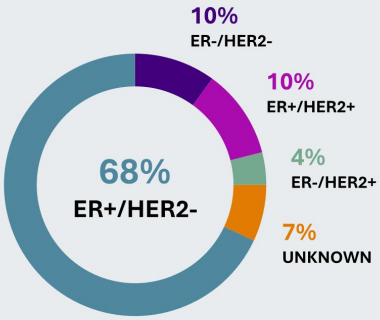
Estimated women in the U.S. will die of metastatic breast cancer in 2024

Source: American Cancer Society

Today's therapies are insufficient to meet patient needs

Patient outcomes reflect limitations and discontinuations of currently available therapies

A majority of all breast cancers are estrogen receptor positive (ER+)



Current ER targeting agents have significant deficiencies

AIs
SERMs
SERDs

- **Incomplete ER antagonism**
- **Sub-optimal PK profile**
- **Limited CNS penetration**
- **Tolerability issues**

Common targeted Tx used in combination with an endocrine agent

- abemaciclib (CDK4/6i)
- palbociclib (CDK4/6i)
- ribociclib (CDK4/6i)
- alpelisib (PI3Kai)
- everolimus (mTORi)
- capivasertib (AKTi)

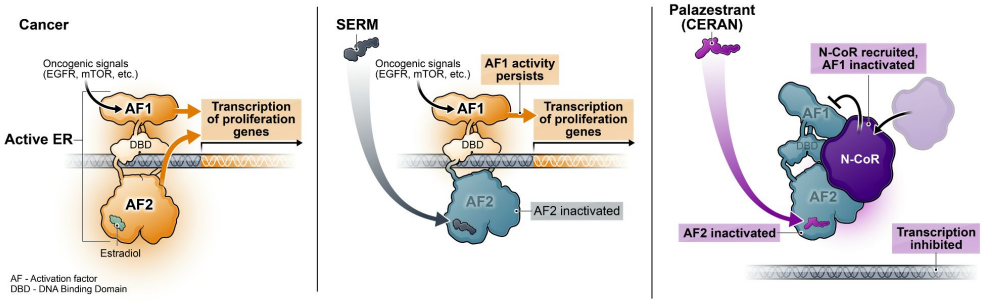
"Aromatase inhibitors are **life-saving** … but **life-eroding** and really difficult to be on."
– ER+/HER2- Stage 3A patient

Source: National Breast Cancer Foundation, World Health Organization; American Cancer Society. Facts and Figures 2024; SEER database
***ER** = estrogen receptor; **HER2** = human epidermal growth factor receptor 2; **AI** = aromatase inhibitor; **SERM** = selective estrogen receptor modulator; **SERD** = selective estrogen receptor degrader; **CDK4/6i** = cyclin-dependent kinase 4/6 inhibitor; **PI3Kai** = phosphatidylinositol 3-kinase alpha inhibitor; **mTORi** = mammalian target of rapamycin inhibitor; **AKTi** = serine/threonine protein kinase 1*

Palazestrant (OP-1250) has the attributes of a therapeutic class leader

A differentiated oral CERAN—a complete estrogen receptor antagonist—targeting metastatic breast cancer with experience in over 400 patients to date

Growth and Proliferation Mechanism Driving ER+ Breast Cancer



Activated ER **drives cancer cell** growth

SERMs and SERDs **partially** inactivate ER

Palazestrant **completely** inactivates ER

Palazestrant delivers what patients need

- Once-daily oral delivery
- Favorable tolerability
- Combinability
- Complete ER antagonism
- Robust tumor shrinkage
- Attractive PK profile
- CNS penetration

Our goal: helping patients **feel better, longer**

Significant opportunity for palazestrant across the spectrum of care

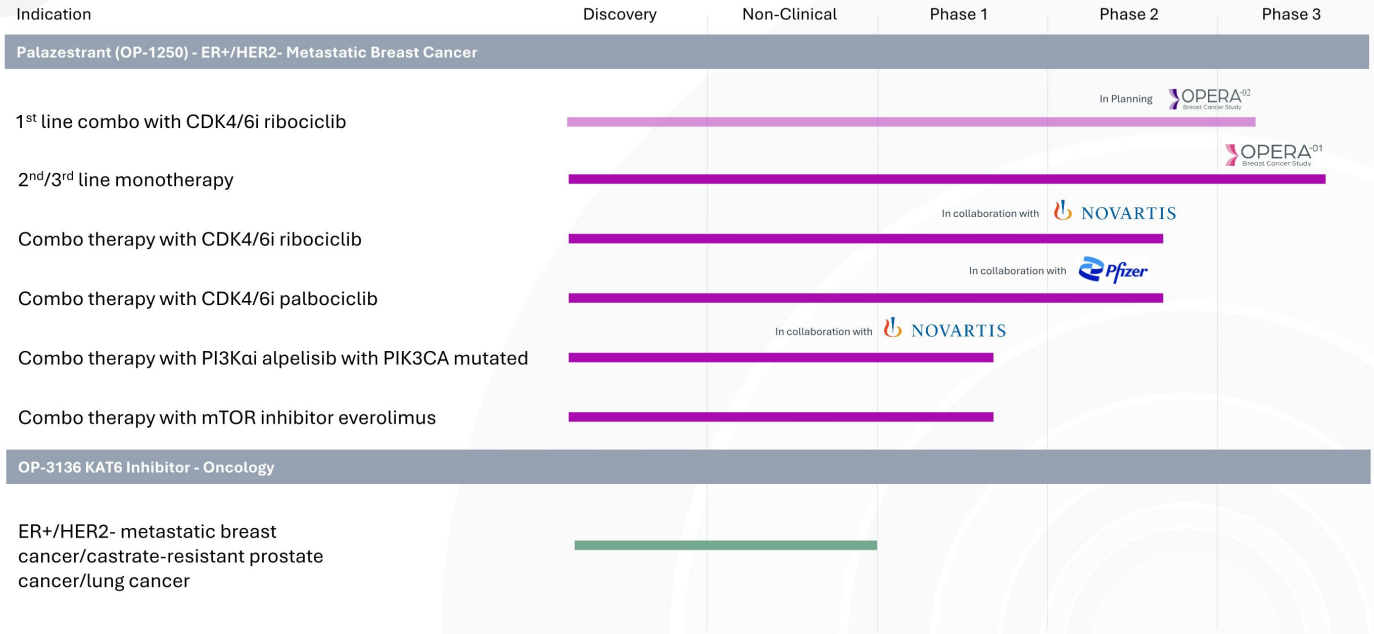
Estimated >$20B ER+/HER2- global metastatic breast cancer market[1]

2L/3L+ ER+/HER2- MBC	Patients[2]	~150K
	Duration of Therapy[3]	~2-12+ months
	Global Market Potential[4]	$5B+
1L ER+/HER2- MBC	Patients[2]	~115K
	Duration of Therapy[3]	~6-36+ months
	Global Market Potential[4]	$10B+

[1] 2025 opportunity estimates for total endocrine therapy market (US and EU5). Olema internal data.
[2] 2025 incidence projection estimates. Olema internal data, Informa ER+/HER2- BC Prevalence Based Market Forecast.
[3] Olema internal data.
[4] Olema internal data.

Rapidly advancing clinical pipeline

Palazestrant second/third-line and first-line clinical trials in metastatic breast cancer



KAT6 *= lysine acetyltransferase 6;* ***ER*** *= estrogen receptor;* ***HER2*** *= human epidermal growth factor receptor 2;* ***CDK4/6i*** *= cyclin-dependent kinase 4/6 inhibitor;* ***PI3Kαi*** *= phosphatidylinositol 3-kinase alpha inhibitor;* ***mTORi*** *= mammalian target of rapamycin inhibitor*

Strategy driven by leaders positioned to go the distance

Oncology and industry experts with track record of advancing programs from clinical to commercial

Executive Leadership Team

Sean Bohen, M.D., Ph.D.
President and CEO

Shane Kovacs
Chief Operating and Financial Officer

Naseem Zojwalla, M.D.
Chief Medical Officer

David Myles, Ph.D.
Chief Discovery and Non-Clinical Development Officer

Julie Dexter
Senior Vice President and Head of People

Experience

AstraZeneca, Genentech, ONYX Pharmaceuticals, Peloton Therapeutics, Abbott, ImClone Systems, KOSAN Biosciences, Eisai, BlueRock Therapeutics, PTC Therapeutics, Turning Point Therapeutics, Roche, RBC Capital Markets, CHIRON, pharmacyclics An AbbVie Company, CREDIT SUISSE

Board of Directors

- Ian Clark
  Chairman of the Board
- Sean Bohen, M.D., Ph.D.
  President and CEO
- Sandra Horning, M.D., FACP, FASCO
- Cindy Butitta
- Scott Garland
- Cyrus Harmon, Ph.D.
- Gorjan Hrustanovic, Ph.D.
- Yi Larson
- Andy Rappaport
- Graham Walmsley, M.D., Ph.D.

CORPORATE PRIORITIES AND ANTICIPATED MILESTONES

2H 2024

- Execute OPERA-01 pivotal Phase 3 2/3L monotherapy trial
- Enroll palazestrant-everolimus Phase 1b/2 clinical study
- Present OP-3136 KAT6i non-clinical data at ENA 2024 (October)
- Present palazestrant-ribociclib combo efficacy update
- File IND for OP-3136 KAT6i

2025

- Initiate OP-3136 KAT6i Phase 1/2 clinical study
- Continue to execute OPERA-01 pivotal Phase 3 2/3L monotherapy trial
- Planning for initiation of OPERA-02 palazestrant-ribociclib 1L pivotal Phase 3 trial

2026

- Announce OPERA-01 pivotal Phase 3 2/3L monotherapy top-line results
- Anticipate OP-3136 KAT6i initial clinical data from Phase 1/2 clinical study
- File NDA for palazestrant for 2/3L monotherapy approval
- Prepare for commercial launch

2027

- Anticipated U.S. commercial launch

Olema ONCOLOGY

KAT6i = *lysine acetyltransferase 6 inhibitor*


OUR PHASE 3 ASSET
— Palazestrant
“Palazestrant is not an endocrine therapy where you need to wait six months to see a patient begin to derive benefit. We’ve seen some not only nice responses, but pretty quick responses—significant reduction of disease burden. And you know, **the patients feel great**.”
– Virginia Borges, M.D.
Professor, Medicine-Medical Oncology
University of Colorado
Principal Investigator
Olema

Clinical development strategy to unlock the potential of palazestrant

A best-in-class backbone therapy with the potential to preserve and prolong a higher quality of life

Establishing palazestrant as the backbone endocrine therapy of choice across the metastatic setting

2/3L+

OPERA-01

- Ongoing 510-patient Phase 3 trial
- Monotherapy trial vs. SoC
- Phase 1/2 monotherapy data support potentially differentiated opportunity
- Top-line results expected 2026

1L

OPERA-02

- Proposed ~1,000 patient Phase 3 trial
- Palazestrant in combination with ribociclib vs. SoC
- Phase 1/2 palazestrant + ribociclib combination data demonstrate no significant DDI and tolerability profile consistent with the FDA-approved label of ribociclib; efficacy maturing
- Planning for initiation in 2025

Olema ONCOLOGY

SoC = standard of care; DDI = drug-drug interaction

Palazestrant monotherapy Phase 2 data supports ongoing Phase 3 trial

Data demonstrate palazestrant is well-tolerated with favorable PK and differentiated efficacy profile

Differentiated Efficacy Profile

- Median PFS of 7.3 months in 2/3L ±CT *ESR1*-mutant
- Median PFS of 5.5 months in 2/3L ±CT *ESR1*-wild-type

Favorable Pharmacokinetics

- High oral bioavailability with daily dosing
- Dose proportional exposure
- Long half-life supports once-daily dosing

Summary Safety

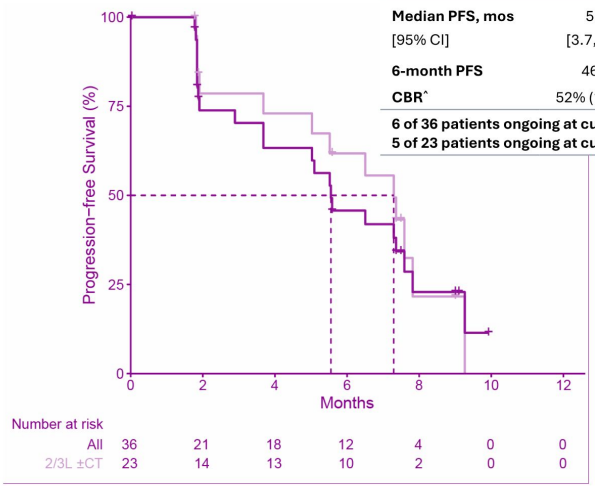
- Well-tolerated
- Most AEs were low grade (1/2)

For more details on this data milestone, please refer to the oral presentation at this link.
***CT** = chemotherapy; **ESR1** = estrogen receptor 1 gene; **PFS** = progression free survival*
Data Cut-off Date: July 7, 2023

Compelling palazestrant Phase 2 data supports ongoing Phase 3 trial

7.3 months mPFS in *ESR1*-mutant; 5.5 months in wild-type for EMERALD-eligible 2/3L ± CT Patients*

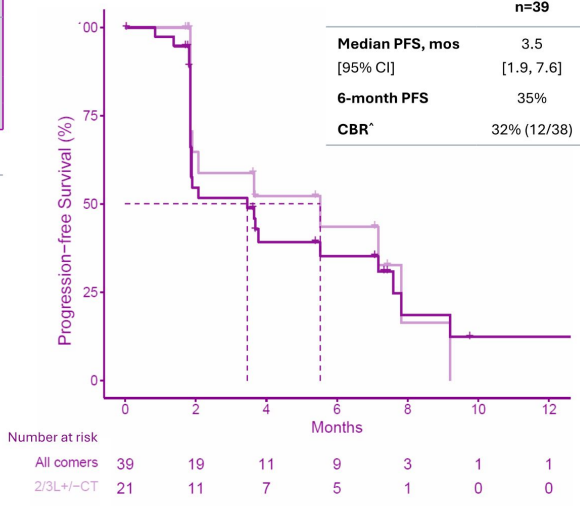
Patients with *ESR1* Mutation[1]



	ESR1 mut n=36	2/3L ±CT n=23
Median PFS, mos	5.6	**7.3**
[95% CI]	[3.7, 7.8]	[5.0, NA]
6-month PFS	46%	**62%**
CBR^	52% (17/33)	**59% (13/22)**

6 of 36 patients ongoing at cut-off overall
5 of 23 patients ongoing at cut-off in 2/3L±CT

Patients with *ESR1* Wild-Type[2]



	ESR1 WT n=39	2/3L ±CT n=21
Median PFS, mos	3.5	**5.5**
[95% CI]	[1.9, 7.6]	**[1.9, NA]**
6-month PFS	35%	**44%**
CBR^	32% (12/38)	**38% (8/21)**

NOTE: This analysis is the aggregation of results across independent studies. There are risks inherent in conducting cross-trial comparisons. Refer to further disclaimers on slide 2

***2/3L** = second/third line; **± CT** = plus/minus chemotherapy; **CBR** = clinical benefit rate; **CI** = confidence interval; **ESR1** = estrogen receptor 1 gene; **mos** = months; **WT** = wild-type; **mut** = mutation; **NA** = not applicable; **mPFS** = median progression-free survival*

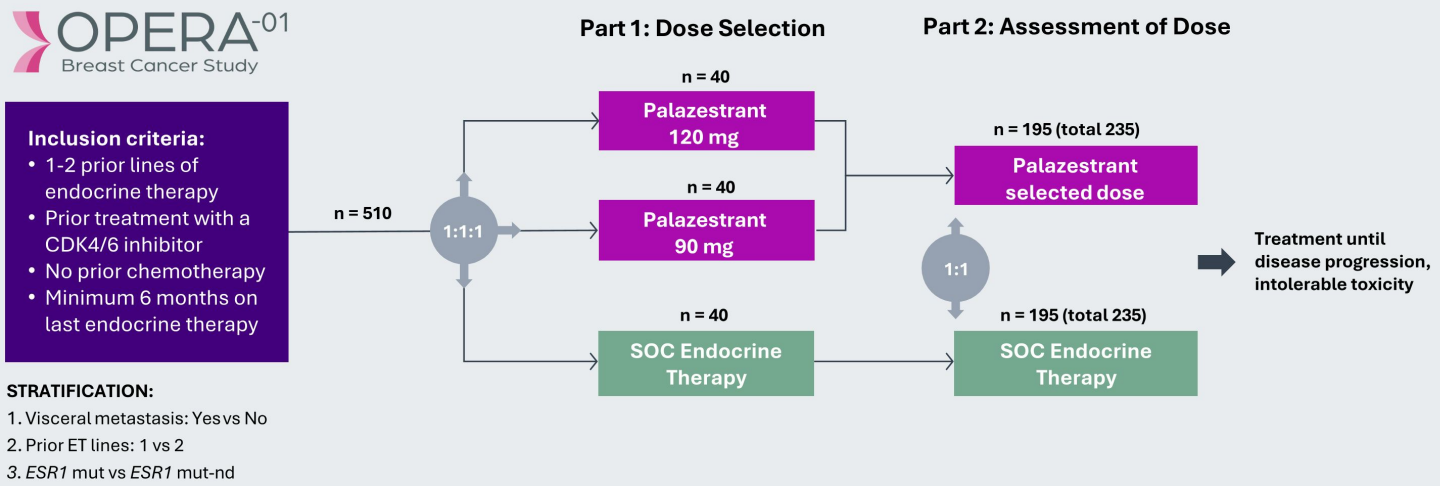
[1] *Palazestrant Phase 2 dataset with ESR1 mutations detected at baseline*

[2] *Palazestrant Phase 2 dataset with ESR1 mutations not detected at baseline*

^ *Clinical Benefit Rate (CBR) is defined as the proportion of subjects who remained on OP-1250 treatment through at least 24 weeks with a confirmed CR or PR, or stable disease. The CBR analysis includes patients who received at least one evaluable post-baseline radiographic assessment. Data cut-off as of July 7, 2023.*

OPERA-01 Phase 3 monotherapy trial designed to show safety/efficacy

510-patient Phase 3 2/3L monotherapy trial vs. standard of care



Study initiated in 4Q 2023. Results expected in 2026.

For more details on this trial, please visit www.opera01study.com.

CDK4/6i = cyclin dependent kinase 4/6 inhibitor; ***ESR1***=estrogen receptor 1 gene; ***SOC*** = standard of care; ***ET*** = endocrine therapy; ***mut*** = mutation; ***mut-nd*** = mutation not detected

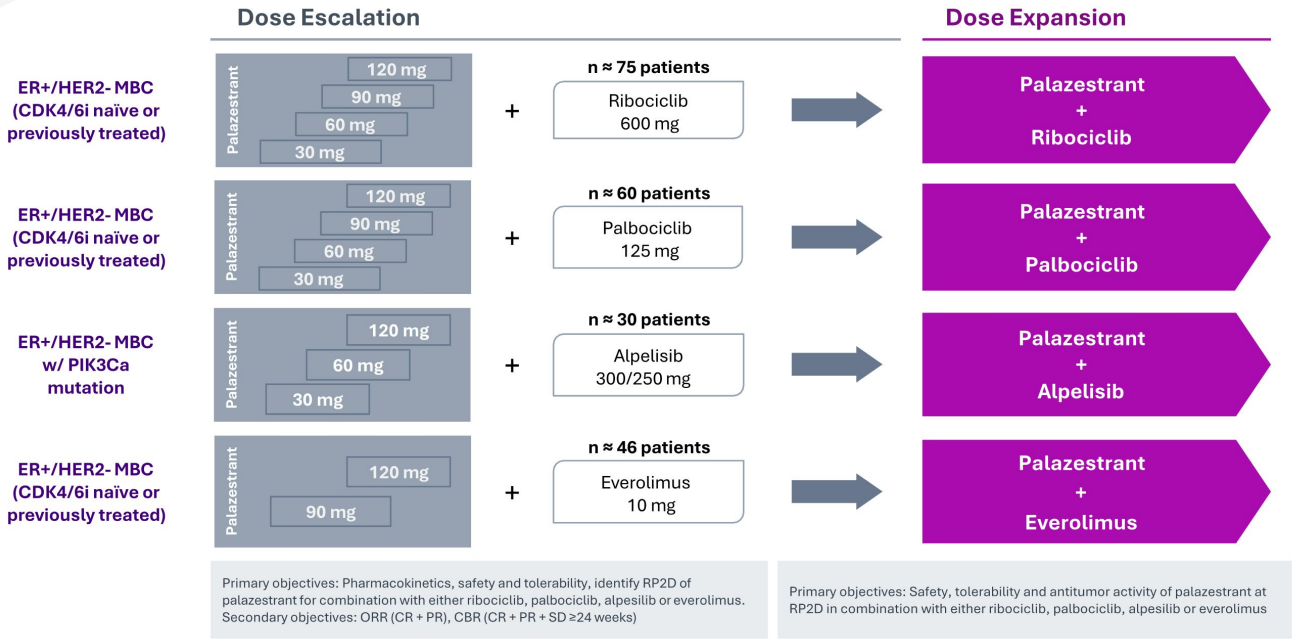
— “Patients with metastatic breast cancer urgently await therapeutic advances that can be used effectively either as monotherapies or in combination with today’s standard of care to not only extend survival rates, but also deliver a better quality of life. With the body of evidence to date and our continued experience in clinical studies, **palazestrant has strong potential to deliver on these persistent unmet needs**.”

Nancy Lin, M.D.
Associate Chief, Division of Breast Oncology
Dana-Farber Cancer Institute

Olema ONCOLOGY

Palazestrant demonstrates combinability with other targeted agents

Promising combinability for front-line use as well as in 2/3L setting



Primary objectives: Pharmacokinetics, safety and tolerability, identify RP2D of palazestrant for combination with either ribociclib, palbociclib, alpesilib or everolimus. Secondary objectives: ORR (CR + PR), CBR (CR + PR + SD ≥24 weeks)

Primary objectives: Safety, tolerability and antitumor activity of palazestrant at RP2D in combination with either ribociclib, palbociclib, alpesilib or everolimus

CDK4/6i *= cyclin dependent kinase 4/6 inhibitor;* ***CBR*** *= clinical benefit rate;* ***CR*** *= complete response;* ***ER+*** *= estrogen receptor positive;* ***HER2-*** *= human epidermal growth factor receptor 2 negative;* ***MBC*** *= metastatic breast cancer;* ***PR*** *= partial response;* ***SD*** *= stable disease;* ***RP2D*** *= recommended Phase 2 dose;* ***ORR*** *= objective response rate*

Combination therapy: palazestrant-ribociclib treatment-emergent AEs

Well tolerated with no DLTs; safety and tolerability profile consistent to ribociclib + ET

Most common treatment-emergent adverse events

TEAEs in ≥20% of patients	Palazestrant + Ribociclib[1]			MONALEESA-2* Letrozole + Ribociclib[2]		
	(n = 50)			(n = 334)		
	All grades	Grade 3	Grade 4	All grades	Grade 3	Grade 4
Neutropenia[a]	38 (76%)	24 (48%)	5 (10%)	93%[b]	49%	11%
Nausea	37 (74%)	1 (2%)	0%	52%	2%	0%
Fatigue	25 (50%)	1 (2%)	0%	37%	2%	<1%
Diarrhea	23 (46%)	1 (2%)	0%	35%	1%	0%
Anemia	18 (36%)	1 (2%)	0%	57%[b]	2%	0%
WBC decreased	18 (36%)	8 (16%)	0%	93%[b]	31%	3%
Constipation	15 (30%)	0%	0%	25%	1%	0%
Creatinine increased	12 (24%)	0%	0%	20%[b]	1%	0%
ECG QT prolonged	12 (24%)	3 (6%)	0%	43%[c]	8%[c]	0%
Thrombocytopenia	10 (20%)	0%	0%	29%[b]	1%	0%

- No patients discontinued palazestrant due to a treatment-related AE; 2 patients discontinued ribociclib while continuing on palazestrant
- Overall safety and tolerability profile consistent with ribociclib + ET prescribing information

** NOTE: This analysis is the aggregation of results across independent studies. There are risks inherent in conducting cross-trial comparisons and results should be interpreted with caution. Refer to further disclaimers on slide 2.*

Data Cutoff Date: March 13, 2024. Data shown are n or n (%).

***DLTs** = dose-limiting toxicities; **TEAE** = treatment-emergent adverse event; **ECG** = electrocardiogram; **WBC** = white blood cells; **ET** = endocrine therapy*

[1] *Includes 3 patients at each of 30 mg and 60 mg palazestrant and 44 patients at 120 mg palazestrant in combination with 600 mg ribociclib. Two patients experienced Grade 5 AEs (myocarditis due to COVID-19; depressed level of consciousness not related to study drug)*

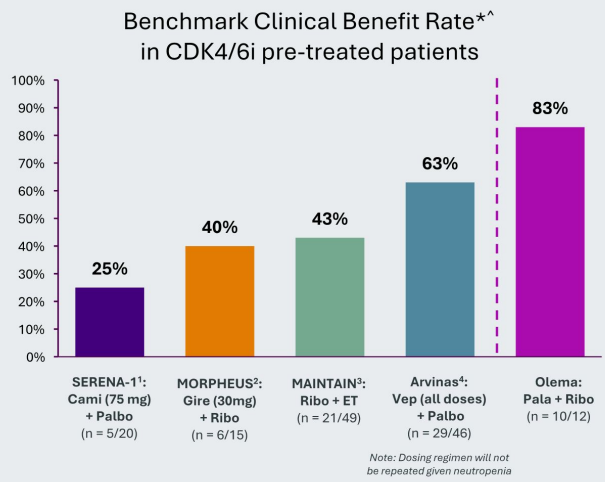
[2] *Source: Novartis Kisqali (ribociclib) Prescribing Information, 2022*

[a] *Combined term includes neutropenia and decreased neutrophil count; These values were taken from MONALEESA-2 lab abnormalities data. c Ribociclib + fulvestrant in MONALEESA-3 per the Ribociclib Approval Package (NUMBER:209092Orig1s001, June 2018); ribociclib + non-steroidal aromatase inhibitors in MONALEESA-7: all grade QTcF prolongation was 46.5% (Grade 2, 5.3%; Grade 3, 9%)*

Combination therapy: efficacy comparison in 2/3L+ patients

MAINTAIN study of ribociclib after CDK4/6i progression serves as clinical benchmark*

Early efficacy signals for palazestrant in combination with ribociclib



- Palazestrant + ribociclib combination showed efficacy in *ESR1*-mut and wild-type patients
  - 85% in all patients (11/13 CBR-eligible)
  - 83% for *ESR1*-mut (5/6 CBR-eligible)
  - 86% for *ESR1*-wt (6/7 CBR-eligible)
  - 83% for prior CDK4/6i (10/12 CBR-eligible)
- MAINTAIN study indicated potential benefit of ribociclib after CDK4/6 inhibitor progression with increase in clinical benefit rate, but was not statistically significant (p=0.06)

** NOTE: This analysis is the aggregation of results across independent studies. There are risks inherent in conducting cross-trial comparisons and results should be interpreted with caution. Refer to further disclaimers on slide 2. Data Cutoff Date: March 13, 2024.*

***ET** = endocrine therapy; **Ribo** = ribociclib; **Cami** = camizestrant; **Gire** = giredestrant; **Vep** = vepdegestrant; **Palbo** = Palbociclib; **Pala** = palazestrant; **ESR1-mut** = ESR1-mutant; **ESR1-wt** = ESR1 wild-type; **CDK4/6i** = CDK4/6 inhibitor*

[1] ASCO 2022 SERENA-1 data. CBR in camizestrant with palbociclib in prior CDK4/6i patients. [2] ASCO 2023 MORPHEUS data. CBR in giredestrant with ribociclib

[3] ASCO 2022 MAINTAIN data. CBR in ET with ribociclib. [4] Source: SABCS 2023 Phase 1b data. CBR in vepdegestrant with palbociclib

^ Clinical benefit rate (CBR) is the proportion of patients who remained on treatment through at least 24 weeks with a confirmed CR or PR or stable disease

Proposed OPERA-02 Phase 3 pivotal trial in combination with ribociclib

~1,000-patient trial vs. standard of care in planning for 2025 initiation

OPERA-02 Breast Cancer Study

Inclusion criteria:
- ER+/HER2- MBC
- Any menopausal status
- No prior systemic therapy for MBC
- No prior CDK4/6 inhibitor for MBC
- Evaluable disease (measurable or non-measurable)

n ≈ 1,000

1:1

Palazestrant + ribociclib

Letrozole + ribociclib

Study Endpoints

Primary: PFS (BIRC)

Secondary : OS (key)
PFS (Investigator and by ESR1mut)
ORR/CBR/DOR (BIRC, Investigator and by ESR1mut)
Safety
PK
Health-related PROs

STRATIFICATION:
- Menopausal status: post vs. pre/male
- Visceral metastasis: Yes vs. No
- *De novo* disease vs recurrent after/on ET vs. recurrent after/on ET+CDK4/6i

CDK4/6 *= cyclin dependent kinase 4/6;* ***CBR*** *= clinical benefit rate;* ***DOR*** *= duration of response;* ***ER+*** *= estrogen receptor positive;* ***HER2-*** *= human epidermal growth factor receptor 2 negative;* ***MBC*** *= metastatic breast cancer;* ***ORR*** *= objective response rate;* ***OS*** *= overall survival;* ***PFS*** *= progression free survival*

Building momentum for palazestrant as a potential backbone therapy

Registration-directed pivotal Phase 3 clinical trials underway and planned

Key factors driving palazestrant momentum

- Complete inhibition of key ER+ receptors
- Mono and combo potential
- Experience in 400+ patients and counting

OPERA-01 Breast Cancer Study

- 510-patient 2/3L Phase 3 monotherapy trial vs. standard of care
- Currently enrolling
- Visit opera01study.com for more information

OPERA-02 Breast Cancer Study

- ~1,000-patient 1L Phase 3 combination trial with ribociclib vs. standard of care
- Planning for initiation in 2025

Planning for palazestrant U.S. commercial launch in 2027

Initial launch anticipated in 2/3L setting with potential 1L launch following positive OPERA-02 trial

Annual U.S. incidence estimated at **~40K** patients

Commercial launch planning beginning in 2025

Early commercial leadership build in 2026

Establishing manufacturing supply and distribution for commercial use

Anticipated targeted field force of **~75–100 reps** to cover U.S. breast oncologists

U.S. market potential of **$3-5B** in 2/3L setting

— KAT6 Inhibitor (OP-3136)

OP-3136: Olema's KAT6 inhibitor*

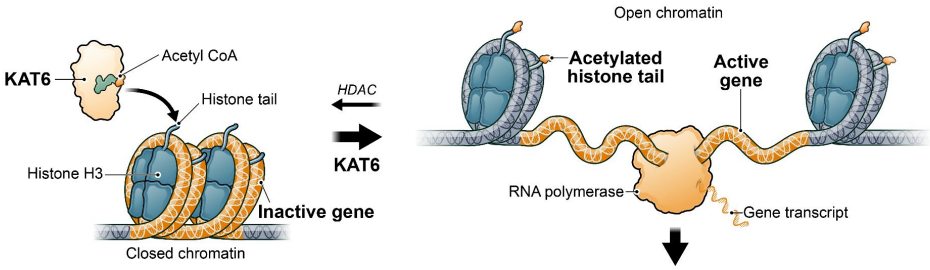
An exciting new and validated target for ER+/HER2- metastatic breast cancer

- Highly potent and selective against KAT6A/B
- Orally bioavailable with high levels of free drug exposure
- OP-3136 synergizes with palazestrant and CDK4/6 inhibitors in preclinical models
- New data to be presented at the ENA ("Triple") meeting in October 2024
- IND filing expected in Q4 2024

*discovered in collaboration with Aurigene
KAT6i = *lysine acetyltransferase 6 inhibitor*

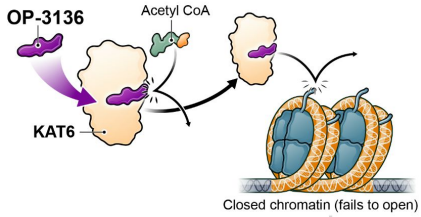
KAT6 inhibitor mechanism of action

KAT6 acetylates chromatin enabling transcription and proliferation



⬆Transcription of proliferation-associated genes
(ER, MYC, etc.)

KAT6 inhibitor prevents transcription



KAT6 inhibition by **OP-3136 stops acetylation** of histones and **blocks transcription of proliferation-associated genes**
(ER, MYC, etc.)

- KAT6 is a clinically validated target[1] and overexpression correlated with worse clinical outcomes in ER+ breast cancer[2]
- KAT6 inhibition downregulates genes involved **in estrogen receptor signaling** and other signaling pathways[3]
- Inhibition regulated gene expression through blockade of acetylation of histones

AR *= androgen receptor;* ***ER*** *= estrogen receptor;* ***KAT6i*** *= lysine acetyltransferase 6 inhibitor*

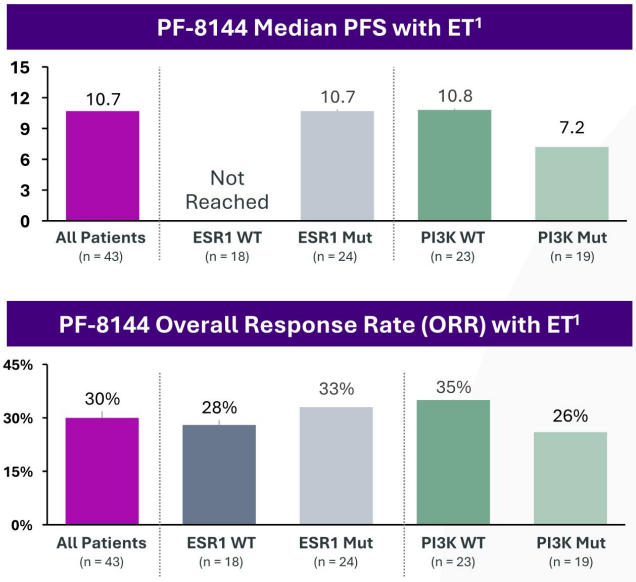
[1] *Sommerhalder D, et al. First-in-human ph 1 dose escalation study of the KAT6 inhibitor PF-07248144 in patients with advanced solid tumors. JCO. 2023. 41(16)1054-1054;*

[2] *Yu L, et, al. Identification of MYST3 as a novel epigenetic activator of ERα frequently amplified in breast cancer. Oncogene. 2017 May 18;36(20):2910-2918*

[3] *Sharma S, et al. Discovery of a highly potent, selective, orally bioavailable inhibitor of KAT6A/B histone acetyltransferases with efficacy against KAT6A-high ER+ breast cancer. Cell Chemical Biology. 30, 1–20*

Note: Olema KAT6 inhibitors discovered in collaboration with Aurigene

Pfizer's KAT6i data demonstrate potential in metastatic breast cancer



First-in-human clinical proof of concept for KAT6 inhibitor from Pfizer has important implications:

- **Validates KAT6 as an active new target for the treatment of metastatic breast cancer**
  - Activity demonstrated regardless of mutation status (*ESR1* and PI3K/AKT/PTEN)
- **Demonstrates promising avenue to have a significant impact on future standard of care**
  - Combination of KAT6 inhibitor + ET demonstrated synergistic activity, consistent with preclinical observations
- **Highlights opportunity for potential best-in-class KAT6 inhibitor OP-3136 in combination with potential best-in-class CERAN palazestrant**

ET *= endocrine therapy;* ***KAT6i*** *= lysine acetyltransferase 6 inhibitor;* ***PFS*** *= progression free survival.*

[1] *Mukohara T, et al. Inhibition of lysine acetyltransferase KAT6 in ER+ HER2- metastatic breast cancer: a phase 1 trial. Nat Med (2024);*

OP-3136 – preclinical data demonstrates specificity for KAT6A/B

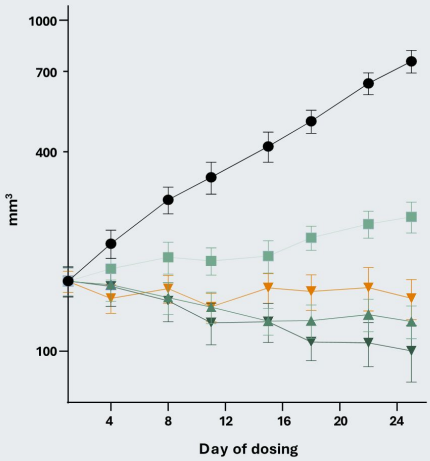
Biochemical Potency and Selectivity		
	OP-3136	**PF-8144**
KAT6A IC_{50} (nM)	9	7
KAT6B IC_{50} (nM)	1	1
KAT5 IC_{50} (nM)	**6792**	**1288**
KAT7 IC_{50} (nM)	108	88
KAT8 IC_{50} (nM)	**4490**	**1372**

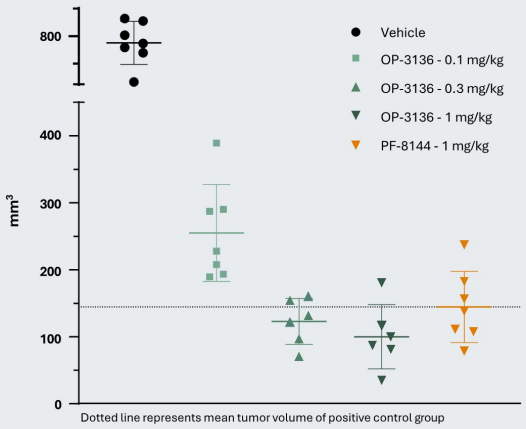
- OP-3136 is **potent and selective against KAT6A/B**
  - OP-3136 shows >500-fold selectivity over other essential KAT family members: KAT5 and KAT8
  - OP-3136 has higher selectivity over KAT5 and KAT8
    - May confer safety advantage
    - PF-8144 5mg QD steady state exposure is ~3000-4000 nM, above IC50 for KAT5 and KAT8

CDK4/6i = cyclin dependent kinase 4/6 inhibitor; KAT6i = lysine acetyltransferase 6 inhibitor
Note: Olema KAT6 inhibitors discovered in collaboration with Aurigene
[1] *Mukohara T, et al. Inhibition of lysine acetyltransferase KAT6 in ER+ HER2- metastatic breast cancer: a phase 1 trial. Nat Med (2024)*

OP-3136 demonstrates anti-tumor activity in xenograft models

Dose-dependent tumor growth inhibition and regression at lower doses compared to PF-8144





AUC_{0-24} (ng*hr/ml)			
Mouse steady state exposure			Human steady state exposure
OP-3136		PF-8144	
0.3 mg/kg	1 mg/kg	1 mg/kg	5 mg QD
23,659	83,994	70,066	36,000

CDK4/6i = cyclin dependent kinase 4/6 inhibitor; ER = estrogen receptor; KAT6i = lysine acetyltransferase 6 inhibitor

Olema: a compelling late-stage opportunity in breast cancer and beyond

Changing the treatment paradigm for endocrine-driven cancers

1. Palazestrant anchors Olema's breast cancer program as a potential backbone therapy for metastatic breast cancer
   - Highly differentiated as first oral CERAN endocrine agent
   - Ongoing 2/3L OPERA-01 Phase 3 trial positioned for success based on strong Phase 2 data
   - Planning 1L OPERA-02 Phase 3 trial in combination with ribociclib
   - Go-to-market strategy for potential U.S. launch in 2027
2. OP-3136 expands pipeline with opportunity against novel and validated KAT6 target
3. Well-capitalized with ~$239M of cash and cash equivalents as of June 30, 2024[1]

[1] *Cash position as of June 30, 2024, includes the Company's cash, cash equivalents, and marketable securities.*

Thank You

— Advancing medicines for breast cancer and beyond

Olema ONCOLOGY