



Fourth Quarter and Full Year 2023 Financial Results

FEBRUARY 15, 2024

Agenda



INTRODUCTION

Kate Haviland

Chief Executive Officer



AYVAKIT PERFORMANCE

Philina Lee, PhD

Chief Commercial Officer



AAAAI 2024 PREVIEW

Fouad Namouni, MD

President, Research &
Development



Q4/FY 2023 FINANCIAL PERFORMANCE

Mike Landsittel

Chief Financial Officer

Forward-looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, statements regarding plans, strategies, timelines and expectations for the company's future business growth, including its expectations for growth in 2024; AYVAKIT's potential as a blockbuster market opportunity in SM; whether the any of the company's product candidates will address unmet medical needs; reduction of the company's opex and cash burn in 2024; statements regarding plans and expectations for the company's current or future approved drugs and drug candidates; the potential benefits of any of the company's current or future approved drugs or drug candidates in treating patients; and the company's financial performance, strategy, goals and anticipated milestones, business plans and focus.

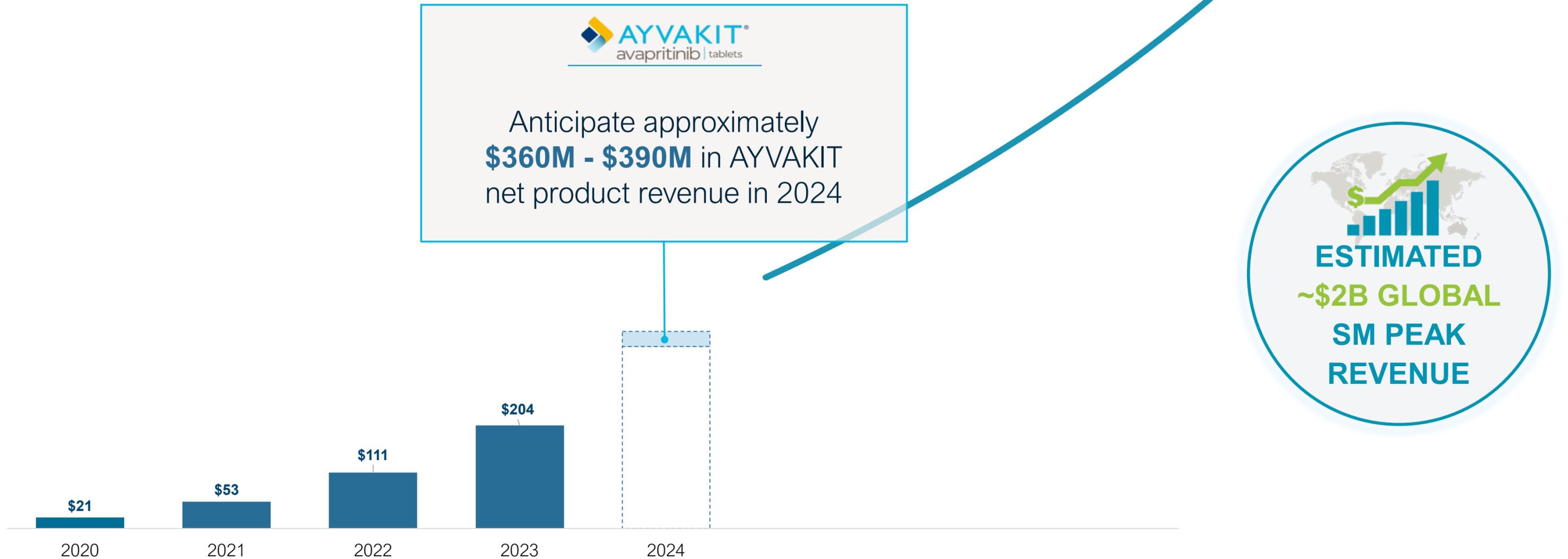
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AYVAKIT net product revenue anticipated to nearly double in 2024

AYVAKIT Annual Net Product Revenue (\$M)



Blueprint Medicines' accelerating growth profile



Capturing a Blockbuster Opportunity

\$204.2M in 2023 revenue
Anticipate **\$360 - \$390M**
in **2024** revenue
1,000 patients
on AYVAKIT in U.S.



Investing in Sustainable Innovation

AYVAKIT long-term safety and efficacy data at AAAAI
BLU-808 for chronic urticaria and other mast cell-driven diseases
BLU-222 as the **backbone of combination therapy** in breast cancer

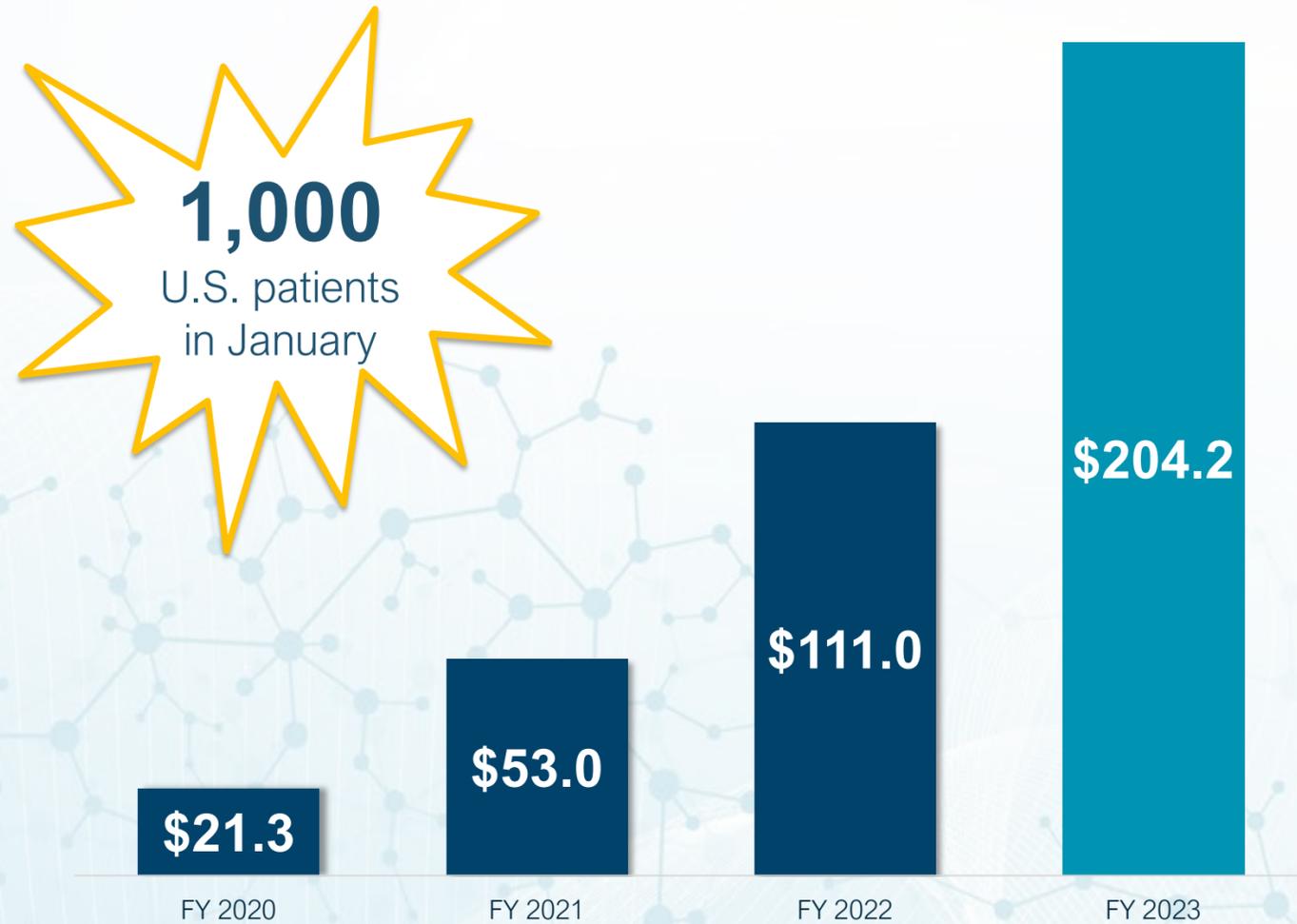


Maintaining Financial Strength

> 80% YoY AYVAKIT revenue growth at guidance midpoint
Strong and **durable financial position** with \$767.2M cash
Continued **reduction in opex and cash burn** in 2024

AYVAKIT revenue grew 84 percent in 2023

Global Net Revenues (\$, Millions)

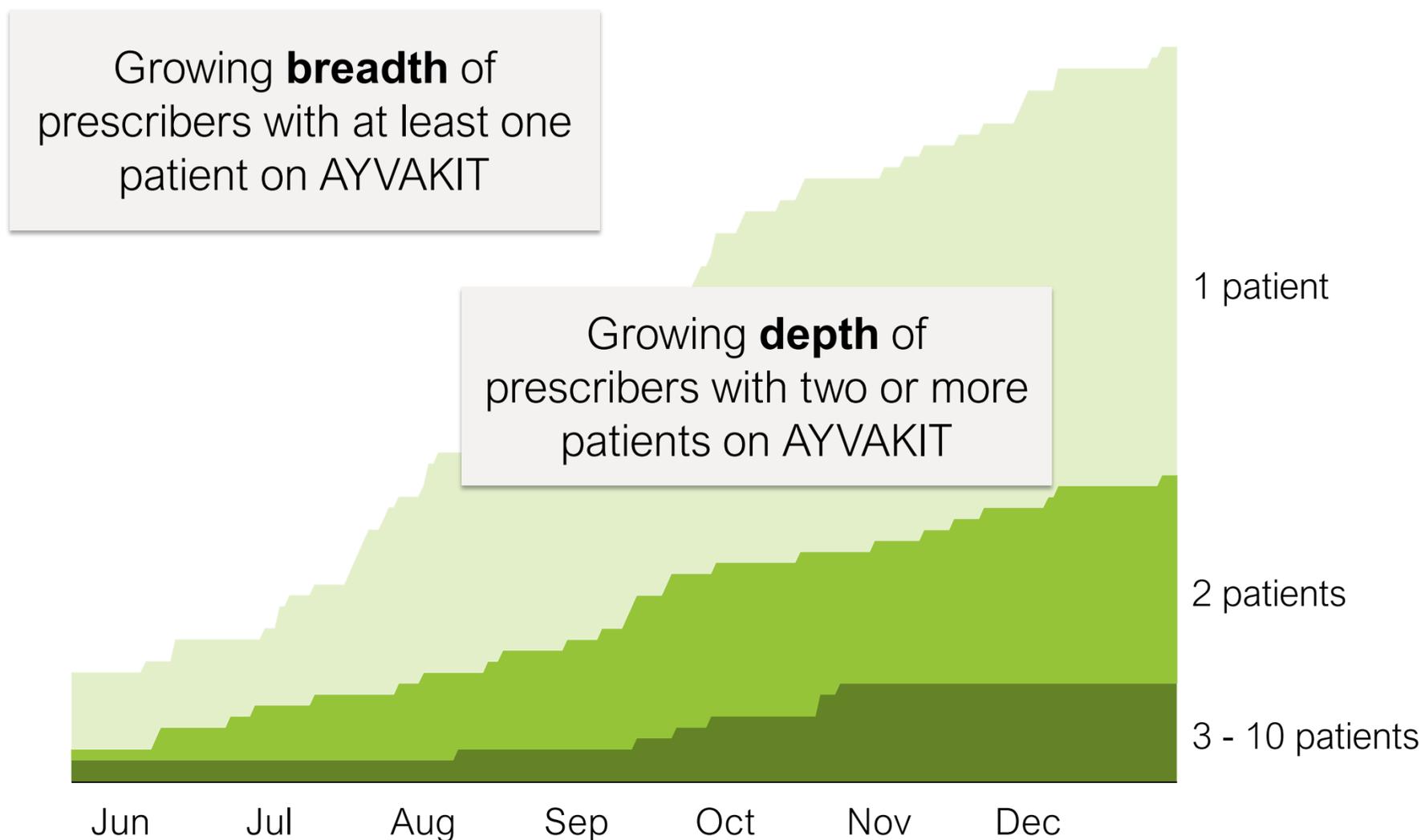


- Free goods decreased to ~25%
- Low discontinuation rates
- High compliance

Achieved **\$71.0M** in AYVAKIT revenue in Q4 2023

Sustaining growth in 2024 and beyond

GROWING BREADTH AND DEPTH AMONG TOP 400 TREATERS BY SM PATIENT VOLUME



- Continued **growth** in share of **allergist prescribing**
- **50/50%** split in prescribing at **academic vs. community** accounts
- **60/40%** of volume driven by **new vs. existing prescribers**
- **73%** of new SM starts at **25 mg dose**

Leadership in the science of mast cell biology and inflammatory disease



Broad and Durable Efficacy

Durable improvement across broad range of symptoms; reductions in best supportive care



Safety Profile Supporting Chronic Treatment

Treatment durations up to 4+ years in PIONEER¹; consistent safety profile at long-term follow-up



BLU-808

Highly selective and very potent wild-type KIT inhibitor; preclinical profile and *in vivo* data in disease models

Leadership in SM and mast cell biology highlighted across breadth of data at AAAAI

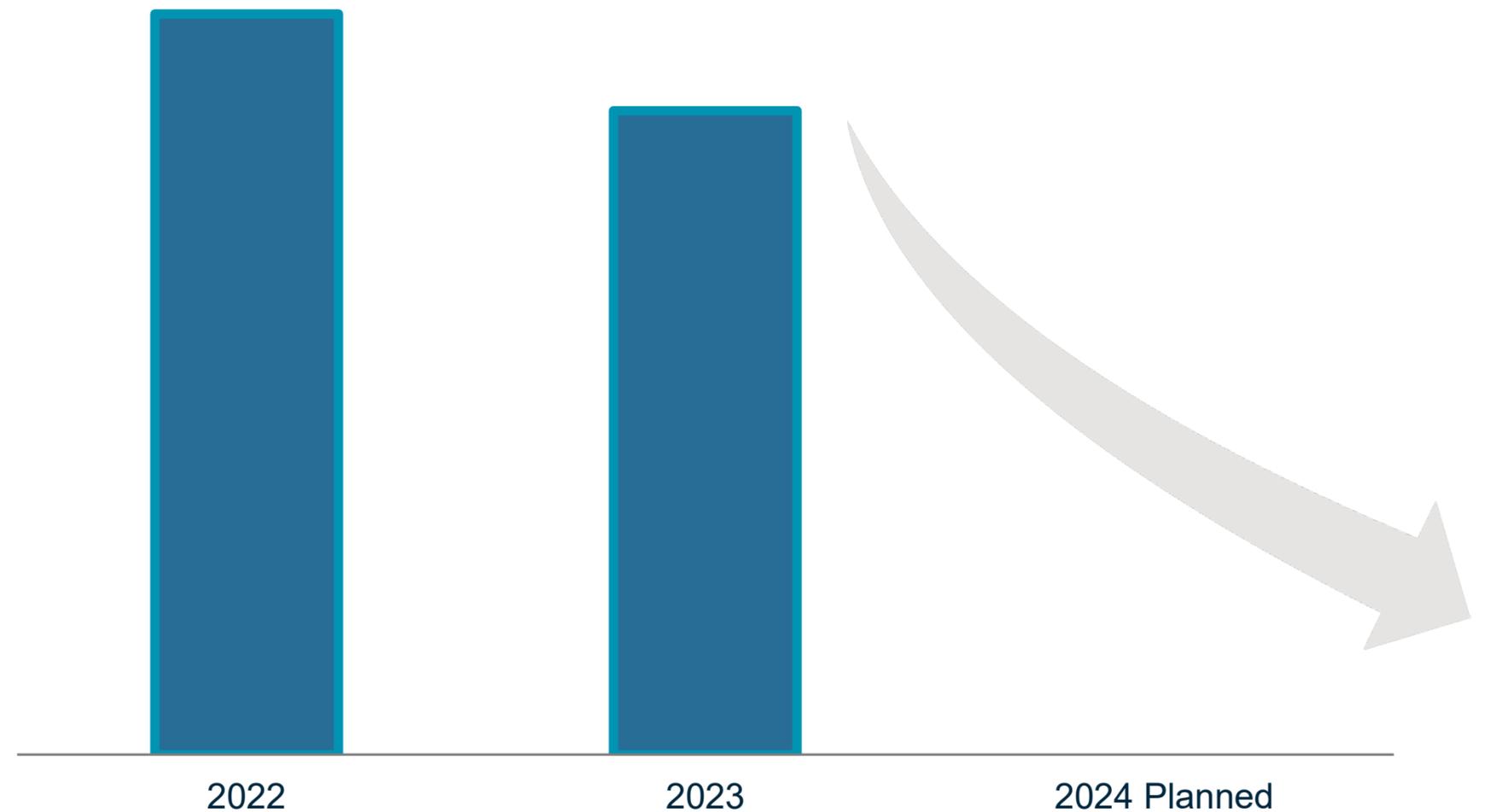
Q4 and FY 2023 financial results

Statement of Operations (unaudited)	Three Months Ended 12/31/2023	Three Months Ended 12/31/2022	FY Ended 12/31/2023	FY Ended 12/31/2022
Total revenue	\$72.0M	\$38.8M	\$249.4M	\$204.0M
Net product sales	\$71.0M	\$30.1M	\$204.2M	\$111.0M
Collaboration revenue	\$1.0M	\$8.7M	\$45.2M	\$65.5M
License revenue – related party	-	-	-	\$27.5M
Cost of sales	\$0.3M	\$4.8M	\$8.5M	\$17.8M
Collaboration loss sharing	-	\$1.9M	\$4.3M	\$8.9M
Research & development expense ¹	\$97.5M	\$117.8M	\$427.7M	\$477.4M
Selling, general & admin expense ²	\$79.3M	\$64.0M	\$295.1M	\$237.4M
Net loss	\$(110.9)M	\$(158.6)M	\$(507.0)M	\$(557.5)M
Balance Sheet (unaudited)			12/31/2023	12/31/2022
Cash, cash equivalents, and investments			\$767.2M	\$1,078.5M

Expect operating expenses and cash burn will continue to decline in 2024

- Anticipate **\$360 - \$390 million in 2024** AYVAKIT revenue on path to **blockbuster opportunity**
- Prioritized capital allocation and continued **reduction in R&D opex**
- **Increasing SG&A operating leverage** from commercial infrastructure
- **Declining cash burn** and durable capital position on **path to profitability**

Operating Cash Burn Will Continue to Decline in 2024+





Thank You