









AGENDA

Introduction

Susie Lisa, CFA, Senior Vice President, Investor Relations

CEO Perspective and Pipeline Update

Reshma Kewalramani, M.D., Chief Executive Officer and President

Commercial Update

Stuart Arbuckle, Executive Vice President and Chief Operating Officer

Financial Results

Charlie Wagner, Executive Vice President and Chief Financial Officer

SAFE HARBOR STATEMENT & NON-GAAP FINANCIAL MEASURES

This presentation contains forward-looking statements that are subject to risks, uncertainties and other factors. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, including all statements regarding the intent, belief, or current expectation of Vertex and members of the Vertex senior management team. Forward-looking statements are not purely historical and may be accompanied by words such as "anticipates," "may," "forecasts," "expects," "potentially," "believes," "seeks," "estimates," and other words and terms of similar meaning. Such statements include, without limitation, the information provided regarding and expectations for future financial and operating performance, the section captioned "Raising Full Year 2024 Produce Revenue Guidance," and statements regarding (i) expectations, development plans and timelines for the company's products and pipeline programs, including expectations for anticipated near-term commercial launch opportunities, anticipated benefits of new products and relevant patient populations, and plans to broaden, diversify and rapidly advance our R&D pipeline across modalities, (ii) expectations for the vanzacaftor triple, including with respect to the preparations for commercial launch in multiple geographies and a substantially lower royalty burden, (iii) expectations regarding VX-522 to reach the >5,000 CF patients who cannot benefit from a CFTR modulator, VX-522 study progress and plans to have VX-522 data in the first half of 2025, (iv) expectations for our acute pain program, including beliefs regarding the potential benefits of suzetrigine as a non-opioid treatment option and that suzetrigine holds the potential to reshape the treatment of acute pain in the U.S., plans to seek a broad acute pain label, expectations regarding the target profile and treatment settings for suzetrigine, updates on the clinical statuses of the intravenous and oral formulations of VX-993, our expectations and plans for near-term launch and beliefs regarding the commercial potential of suzetrigine, including as multi-billion dollar opportunity, our estimates on the treatable patient population and potential impactful legislation, (v) expectations for our PNP pain program, including plans to seek a broad PNP label, plans to advance suzetrigine in DPN into Phase 3 pivotal development in the third quarter of 2024, status of the Phase 2 study of suzetrigine in LSR and expectations for study results in late 2024, plans to advance an oral formulation of VX-993 into a Phase 2 study in PNP in Q3 2024, and plans to advance additional NaV 1.7 and NaV1.8 inhibitors, (vi) expectations for our T1D program, including beliefs for a potentially curative treatment and the treatable patient population, the potential benefits of VX-880, the status of the global VX-880 study and expectations for VX-880 data, (vii) expectations with respect to the therapeutic scope and potential benefits of povetacicept, including the "pipeline-in-a-product" potential, our beliefs regarding povetacicept's target patient population, and our beliefs regarding the clinical progress and availability of clinical data for Alpine's pipeline, (viii) expectations regarding our CF program, (ix) expectations for CASGEVY, including potential benefits for patients with SCD or TDT, expectations for ongoing commercial launch, including as a multi-billion dollar opportunity, our estimates on treatable patient population across geographies, expectations with respect to access and reimbursement, expectations for additional regulatory approvals, ATC activations and patient cell collections, and plans for studies in younger age groups. While Vertex believes the forward-looking statements contained in this presentation are accurate, these forward-looking statements represent the company's beliefs as of the date of this presentation and there are risks and uncertainties that could cause actual events or results to differ materially from those expressed or implied by such forward-looking statements. Those risks and uncertainties include, among other things, that data from clinical trials, especially if based on a limited number of patients, may not to be indicative of final results, the company may not be able to successfully integrate or profit from the Alpine acquisition, the company's regulatory submissions may be delayed, actual patient populations eligible for our products may be smaller than anticipated, data from the company's development programs may not be available on expected timelines, or at all, support registration or further development of its potential medicines due to safety, efficacy or other reasons, and other risks listed under the heading "Risk Factors" in Vertex's annual report and subsequent guarterly reports filed with the Securities and Exchange Commission at www.sec.gov and available through the company's website at www.vrtx.com. You should not place any undue reliance on these statements, or the data presented. Vertex disclaims any obligation to update the information contained in this presentation as new information becomes available.

In this presentation, Vertex's financial results and financial guidance are provided in accordance with accounting principles generally accepted in the United States (GAAP) and using certain non-GAAP financial measures. In particular, non-GAAP financial results and guidance exclude from Vertex's pre-tax income (i) stock-based compensation expense, (ii) intangible asset amortization expense, (iii) gains or losses related to the fair value of the company's strategic investments, (iv) increases or decreases in the fair value of contingent consideration, (v) acquisition-related costs, and (vi) other adjustments. The company's non-GAAP financial results also exclude from its provision for income taxes the estimated tax impact related to its non-GAAP adjustments to pre-tax income described above and certain discrete items. These results should not be viewed as a substitute for the company's GAAP results and are provided as a complement to results provided in accordance with GAAP. Management believes these non-GAAP financial measures help indicate underlying trends in the company's business, are important in comparing current results with prior period results and provide additional information regarding the company's financial position that the company believes is helpful to an understanding of its ongoing business. Management also uses these non-GAAP financial measures to establish budgets and operational goals that are communicated internally and externally, to manage the company's business and to evaluate its performance. The company's calculation of non-GAAP financial measures likely differs from the calculations used by other companies. The company provides guidance regarding combined R&D and SG&A expenses and effective tax rate on a non-GAAP basis. The guidance regarding combined Acquired IPR&D expenses does not include estimates associated with any potential future business development transactions, including collaborations, asset acquisitions and/or licensing of third-party intellectual property rights. The co

CONTINUED MOMENTUM AND OUTSTANDING EXECUTION ACROSS THE BUSINESS IN Q2

Expand our leadership and raise the bar in CF

- Continue to reach more people living with cystic fibrosis
- Vanzacaftor triple: NDA accepted with Priority Review, Jan. 2, 2025 PDUFA
 - MAAs validated in EU and U.K.
- VX-522: MAD portion of study underway; for >5K pts who can't benefit from CFTRm

Drive multiple near-term commercial launch opportunities

- CASGEVY: Launched in SCD/TDT; more ATCs activated, growth in patient cell collections across all regions
- Suzetrigine for moderate to severe acute pain: NDA accepted with Priority Review; Jan. 30, 2025 PDUFA

Advance R&D pipeline

- Suzetrigine: DPN Phase 3 study to initiate Q3:24; LSR Phase 2 study completed enrollment, with results expected in late 2024
- VX-880 (T1D): Positive updated data at ADA; secured regulatory endorsement to expand enrollment to 37 patients
- Povetacicept (IgAN): Phase 3 trial to initiate Q3:24

Deliver financial performance

- Q2:24 product revenue \$2.65B; increasing FY product revenue guidance to \$10.65 \$10.85B
- Sustain strong operating margins while continuing to invest in pipeline and commercial capabilities for potential new launches
- Closed \$5B purchase of Alpine Immune Sciences



CF: EXPANDING LEADERSHIP & RAISING THE BAR WITH SERIAL INNOVATION

VANZACAFTOR TRIPLE: U.S. PDUFA: JANUARY 2, 2025 AND U.K. & EU REGULATORY SUBMISSIONS VALIDATED



Vanzacaftor Triple

- Positive Phase 3 results met high expectations:
 - non-inferior to TRIKAFTA on lung function
 - superior to TRIKAFTA on sweat chloride, a measure of CFTR protein function
- Convenient, once-daily dosing
- Substantially lower royalty burden
- NDA accepted with priority review and PDUFA target action date of January 2, 2025
- MAA submissions validated in EU and U.K.



VX-522

- CFTR mRNA therapy in development for >5,000 CF patients who cannot benefit from CFTR modulators
- Single ascending dose portion completed and multiple ascending dose (MAD) portion of the Phase 1/2 study underway
- Expect to complete and share results from the study in H1:2025

NOVEL, EFFECTIVE, NON-OPIOID THERAPIES FOR MODERATE TO SEVERE ACUTE PAIN

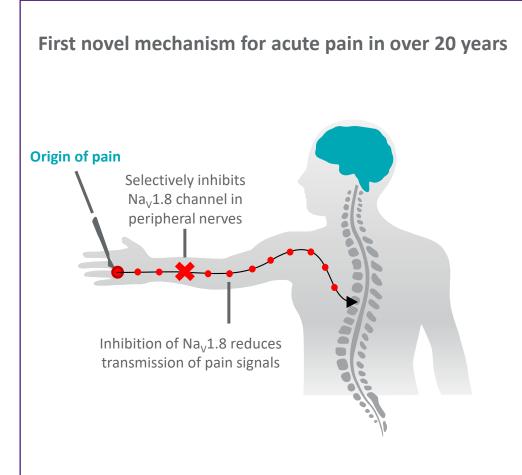
Suzetrigine (VX-548) is an oral, selective Nav1.8 pain signal inhibitor with the potential to treat acute pain types across multiple care settings

- ✓ Compelling combination of strong safety and strong efficacy in Phase 3
- ✓ NDA submission accepted with Priority Review; Jan. 30, 2025 PDUFA

VX-993 is the next generation selective Nav1.8 pain signal inhibitor in the acute pain pipeline

- ✓ Enrolling and dosing patients in Phase 1 trial with IV formulation
- ✓ Initiating Phase 2 study of oral formulation following bunionectomy surgery in Q3:24

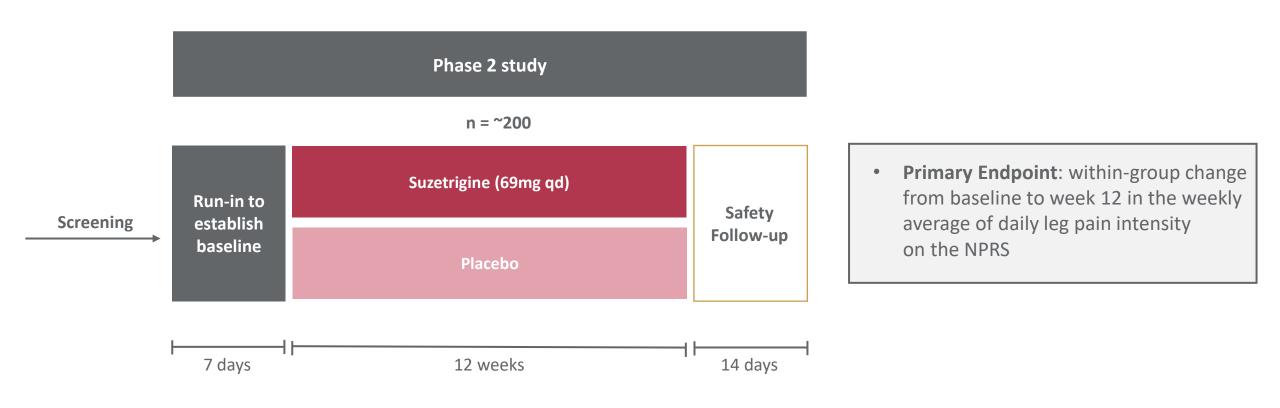




Seeking a broad moderate-to-severe acute pain label for suzetrigine

LUMBOSACRAL RADICULOPATHY (LSR): SUZETRIGINE PHASE 2 STUDY COMPLETED ENROLLMENT EARLY AND RESULTS EXPECTED BY END OF YEAR

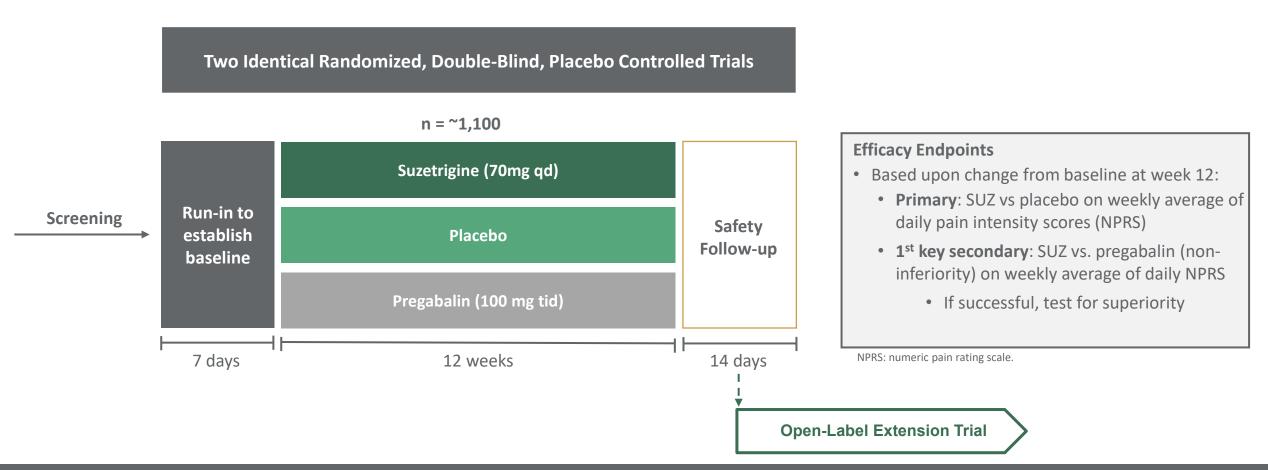




LSR affects >4 million people in the U.S. with significant unmet need

DIABETIC PERIPHERAL NEUROPATHY (DPN): SUZETRIGINE PHASE 3 PIVOTAL PROGRAM TO BEGIN IN Q3





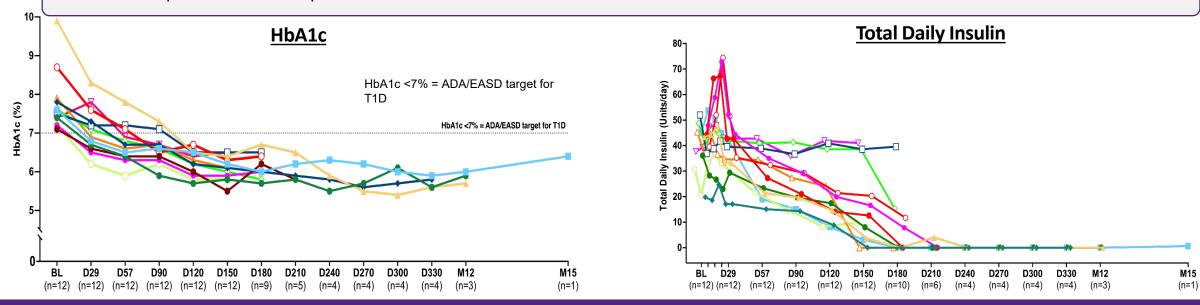
The U.S. FDA granted Breakthrough Therapy Designation to suzetrigine in DPN

TYPE 1 DIABETES: ADVANCING POTENTIALLY CURATIVE TREATMENTS FOR ~3.8M PATIENTS IN NORTH AMERICA & EUROPE ALONE



UPDATED VX-880 PHASE 1/2 TRIAL DATA FROM ADA CONTINUE TO DEMONSTRATE POTENTIAL AS A FUNCTIONAL CURE

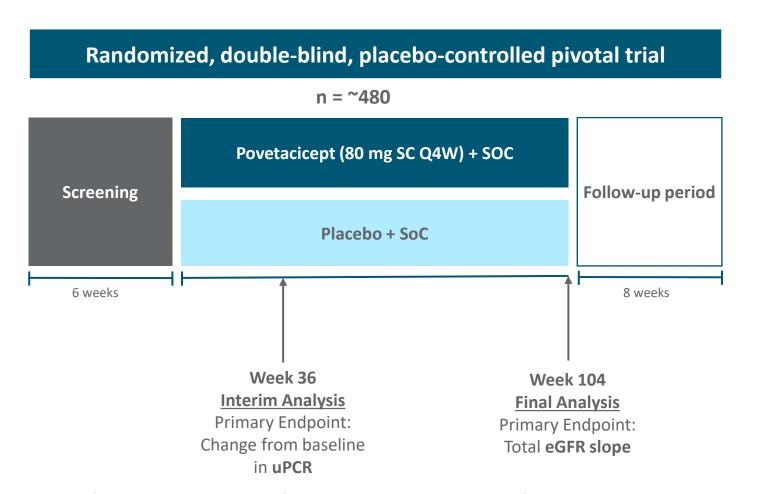
- All patients dosed demonstrated islet cell engraftment and glucose-responsive insulin production
- All 12 patients who received single, full-dose infusion achieved a reduction in HbA1c to <7%
 - All 12 participants had elimination of severe hypoglycemic events (SHEs) during the evaluation period (day 90 onward)
 - 11 of 12 patients had reduction or elimination of exogenous insulin use at most recent visit
 - All 3 evaluable patients with at least 12 months of follow-up met the primary endpoint of SHE elimination and HbA1c < 7% and the secondary endpoint of insulin independence



Original 17-patient Phase 1/2 study has completed enrollment and dosing; Secured regulatory endorsement to expand study to 37 patients

POVETACICEPT: SUCCESSFUL EOP2 MEETINGS & ON TRACK TO INITIATE GLOBAL PHASE 3 IN IGAN LATER THIS MONTH

SIGNIFICANT UNMET NEED WITH ~130K PATIENTS IN THE U.S. ALONE





- Best-in-class potential: Pove is a dual APRIL/BAFF inhibitor; holds promise as a transformative approach for IgA nephropathy (IgAN), a serious, progressive, autoimmune kidney disease
- A pre-planned interim analysis will occur when a certain number of patients reach 36 weeks; if positive, potential to file for accelerated approval in the U.S.
- "Pipeline-in-a-product" potential with two Phase 2 basket studies ongoing:
 - RUBY-3: autoimmune renal diseases
 - RUBY-4: autoimmune cytopenias

EoP2: End-of-Phase 2; eGFR: estimated glomerular filtration rate; SC: subcutaneous; SOC: standard of care; uPCR: urine protein to creatinine ratio; Q4W, every 4 weeks.

CLINICAL PORTFOLIO IS BROAD, DIVERSE AND RAPIDLY ADVANCING

ON TRACK TO MEET GOAL OF FIVE LAUNCHES OVER FIVE YEARS (2028)

Select, Next Wave Research-stage Programs	Phase 1 in Healthy Volunteers	Phase (1)/2 in Patients	Pivotal Development	Regulatory Submissions Completed or Underway	Approved
Hypoimmune islet cells Type 1 diabetes	Follow-on molecules:	VX-880 Type 1 diabetes	Inaxaplin AMKD	Exa-cel add'l geographies SCD & TDT	
Small molecule Huntington's	• CF • Pain	VX-264 cells + device Type 1 diabetes	Suzetrigine Peripheral Neuropathic Pain - DPN (Q3:24E start)	Suzetrigine Acute Pain	trikafta
Improved conditioning CASGEVY – SCD & TDT	• AMKD	Suzetrigine Peripheral Neuropathic Pain - LSR	Povetacicept IgA nephropathy (Q3:24E start) start)	Cystic Fibrosis	symdeko
NaV1.7 inhibitor Pain	ADPKD VX-993	VX-993 Acute pain (Q3:24E start)			ORKAMB
Small molecule AATD	IV	VX-993 DPN (Q3:24E start)			
		VX-522 CFTR mRNA			kalydeco
		VX-670 DM1			casgev (exagamglogene autotemo
		Povetacicept, RUBY3 (pMN, LN, AAV)			(exagamylogene autotemo
©2024 Vertex Pharmaceuticals Incorporated		Povetacicept, RUBY4 (ITP, AIHA, CAD)			

EXPANDING LEADERSHIP IN CF AND RAISING THE BAR WITH SERIAL INNOVATION

~92,000

patients with CF*

~20,000 eligible patients not on CFTR modulators

GROWTH DRIVERS

- ✓ Treating younger patients
- ✓ Patients living longer
- ✓ Serial CFTRm innovation
- ✓ mRNA for last >5,000 patients

Best-in-class medicines

Goal: carrier levels of CFTR function for all patients

VX-522 mRNA

 For the last >5,000 patients who cannot benefit from CFTR modulators

Vanzacaftor triple

- FDA accepted NDA; PDUFA target action date of January 2
- MAAs validated in EU and U.K.; submissions complete in Canada, Australia, Switzerland and New Zealand
- Commercial launch prep rapidly progressing

Cystic Fibrosis
Approvals











CASGEVY REPRESENTS A POTENTIAL MULTI-\$B OPPORTUNITY FOR VERTEX

STRONG PROGRESS WITH ATC ACTIVATION, PHYSICIAN & PATIENT ENGAGEMENT, AND ACCESS

Patients

Providers

Payers

~35,000 Severe patients in U.S., Europe

>35
ATCs activated; expect to activate ~75 ATCs

U.S.

Strong payer support across commercial, Medicaid and Medicare segments

~23,000 Eligible patients in the Kingdom of Saudi

~20

globally over time

OUS

Early Access Program in France for TDT & SCD; reimbursement in Austria, Bahrain, KSA

Arabia and Bahrain G

Patients have had cells collected, as of mid-July.
Growing number of patients initiating the treatment journey in every region where CASGEVY is approved





Victoria Gray, Sickle Cell Warrior First SCD patient dosed, now >5 years post-treatment



ATC: Authorized Treatment Center © 2024 Vertex Pharmaceuticals Incorporated

ACUTE PAIN IS A MULTI-BILLION DOLLAR MARKET, WITH SIGNIFICANT UNMET NEED





- **80M patients** are prescribed a medicine for moderate to severe acute pain every year in the U.S.; >1B calendar days of treatment
- Specialty market due to high concentration of prescribing
 - ~2/3 of patients treated in the institutional setting
 - ~50% of prescriptions originate in the institutional setting
- Focus on institutions, high volume procedures/conditions, key HCPs
 - Earliest uptake expected in the discharge segment

- Completed hiring of field team and strategic account leads
- Engaging with key decision-makers across the access landscape
- Range of initiatives for first year of launch to support patient access
- Federal and state legislative tailwinds:
 - NOPAIN Act add-on payment takes effect Jan. 1, 2025*
 - Alternatives to PAIN Act introduced in both houses of Congress

Suzetrigine holds the potential to fundamentally reshape the treatment of acute pain in the U.S.

Q2 2024 FINANCIAL HIGHLIGHTS

(\$ in millions except where noted or per share data and percentages)	Q2 23	FY 23	Q2 24
Total product revenues	\$2.49B	\$9.87B	\$2.65B
TRIKAFTA/KAFTRIO	2.24B	8.94B	2.45B
Other CF products	253	925	196
Combined non-GAAP R&D and SG&A expenses	928	3.71B	978
Acquired IPR&D expenses	111	<u>527</u>	<u>4.45B</u>
Non-GAAP operating income	1.15B	4.37B	(3.15)B
Non-GAAP operating margin %	46%	44%	(119)%
Non-GAAP net income	1.01B	3.97B	(3.31)B
Non-GAAP net income per share – diluted	\$3.89	\$15.23	\$(12.83)
Cash, cash equivalents & total marketable securities (period-end)	\$12.6B	\$13.7B	\$10.2B

Notes: An explanation of non-GAAP financial measures and reconciliation of combined non-GAAP R&D and SG&A expenses, non-GAAP operating income and non-GAAP net income to corresponding GAAP measures are included in the company's Q2 2024 press release dated August 1, 2024. Non-GAAP financial measures are presented compared to corresponding GAAP measures in the appendix of this presentation.

RAISING FULL YEAR 2024 PRODUCT REVENUE GUIDANCE

	Current FY 2024 Guidance	Previous FY 2024 Guidance	Commentary	
Total Product Revenues	\$10.65 - \$10.85	\$10.55 - \$10.75B	Includes expectations for continued growth in CF as well as contribution in the second half from the launch of CASGEVY in approved indications and geographies.	
Combined GAAP R&D and SG&A Expenses	\$5.0 - \$5.2B	\$4.8 - \$5.0B*	Absorbing Alpine SG&A and R&D expenses for th	
Combined Non-GAAP R&D and SG&A Expenses	Unchanged	\$4.2 - \$4.3B*	remainder of 2024.	
Acquired IPR&D Expenses	\$4.6B	\$125 million*	Updated guidance includes the Alpine Acquired IPR&D charge of \$4.4 billion in Q2:24.	
Non-GAAP Effective Tax Rate	~100%**	20%-21%	Impacted by non-deductible Alpine acquired IPR&D charge, underlying FY 2024 effective tax rate would have remained in a range of 20% - 21%.	

^{*}Guidance ranges provided on May 6, 2024 included combined GAAP R&D, Acquired IPR&D and SG&A expenses of \$4.9-\$5.1 billion and combined Non-GAAP R&D, Acquired IPR&D and SG&A expenses of \$4.3-\$4.4 billion. Included in both ranges were approximately \$125 million for Acquired IPR&D expenses.

^{**}Full year non-GAAP tax rate is impacted by the Alpine Acquired IPR&D expense, which is non-deductible for tax.

MULTIPLE CATALYSTS THROUGHOUT 2024 AND BEYOND

	RECENT HIGHLIGHTS	ANTICIPATED KEY MILESTONES
₩	 KALYDECO received European Commission approval in infants with CF ages 1 mo to <4 mo Vanzacaftor triple: NDA accepted with Priority Review VX-522 CFTR mRNA study: SAD completed; MAD underway 	 Continue to reach more eligible patients; expand into younger age groups Vanza triple: Potential FDA approval and launch (Jan. 2, 2025 PDUFA) VX-522: Complete MAD portion of the study and share data in H1:2025
	 CASGEVY: Continued strong launch progress across all regions Regulatory reviews ongoing in Canada (priority review) and Switzerland for SCD and TDT 	 CASGEVY: Reach more eligible patients across geographies with regulatory approval and access Secure additional global regulatory approvals and reimbursement agreements
***	 Suzetrigine: Acute: NDA accepted with Priority Review DPN: Successful End-of-Phase 2 meeting with FDA; preparing for Phase 3 LSR: Completed enrollment ahead of schedule in Phase 2 study 	 Suzetrigine: Acute: Potential FDA approval and launch with (Jan. 30, 2025 PDUFA) DPN: Initiate Phase 3 program in Q3:2024 LSR: Complete Phase 2 dosing and share results in late 2024
	 VX-993: Acute: On track to begin Phase 2 study (oral); continue to enroll and dose Phase 1 (IV) VX-993: DPN: On track to begin Phase 2 (oral) 	 VX-993: Acute: Initiate Phase 2 study in Q3:24 for acute; complete Phase 1 study for acute pain (IV) / DPN: Initiate Phase 2 study in Q3:24 (oral)
GP	 Inaxaplin (AMKD): Enrolling and dosing patients in Phase 3 portion of Phase 2/3 trial VX-407 (ADPKD): Phase 1 clinical trial in healthy volunteers well underway 	 Inaxaplin: Continue to enroll and dose patients in Phase 3 trial VX-407: Complete Phase 1 study
	 VX-880 (T1D): Positive data update at ADA; Enrollment and dosing complete in original 17-patient study; secured regulatory endorsement to expand Phase 1/2 trial to 37 patients VX-264: Part A complete. Part B of Phase 1/2 trial underway 	 VX-880: Enroll and dose additional patients; meet with regulators on pivotal development requirements VX-264: Complete Part B
	 VX-670 (DM1): Phase 1/2 clinical trial enrolling and dosing DM1 patients in SAD portion of the study 	Complete the SAD portion of the study by end of 2024; initiate the MAD portion
	 Closed Alpine Immune Sciences acquisition Successful EoP2 regulatory meetings for povetacicept in IgAN 	 Initiate povetacicept Phase 3 trial in IgAN this month (August) Continue to enroll and dose Phase 2 basket studies in autoimmune renal diseases and cytopenias; data readouts from some cohorts later in 2024/early 2025

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SECOND QUARTER 2024 FINANCIAL RESULTS



APPENDIX

GAAP TO NON-GAAP FINANCIAL INFORMATION

(\$ in millions except as noted, per share data and percentages)	Q2 23	FY 23	Q2 24
Combined R&D and SG&A			
GAAP	1.05B	4.30B	1.34B
Non-GAAP	928	3.71B	978
Operating income			
GAAP	1.03B	3.83B	(3.51)B
Non-GAAP	1.15B	4.37B	(3.15)B
Operating Margin %:			
GAAP	41%	39%	(133)%
Non-GAAP	46%	44%	(119)%
Net income			
GAAP	916	3.62B	(3.59)B
Non-GAAP	1.01B	3.97B	(3.31)B
Net income per share - diluted			
GAAP	\$3.52	\$13.89	\$(13.92)
Non-GAAP	\$3.89	\$15.23	\$(12.83)

Note: An explanation of non-GAAP financial measures and reconciliation of combined non-GAAP R&D and SG&A expenses, non-GAAP operating income and non-GAAP net income to corresponding GAAP measures are included in the company's Q2 2024 press release dated August 1, 2024.