LIGAND

Biopharma's Technology and Capital Partner

AUGUST 6, 2024

Second Quarter 2024 Financial Results

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- The process for reconciliation between the non-GAAP adjusted financial numbers and corresponding GAAP figures is usually shown in the quarterly earnings press release or the fiscal year annual report, available at https://investor.ligand.com/press-releases. However, other than with respect to total revenues, the Company only provides financial guidance on an adjusted basis and does not provide reconciliations of such forward-looking adjusted measures to GAAP due to the inherent difficulty in forecasting and quantifying certain amounts that are necessary for such reconciliation.
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Q2 '24 Highlights

FINANCIAL
Strong financial performance

- Double-digit growth in royalties
- 2024 revenue and earnings guidance raised at time of Aperion acquisition
- Cash $226.9 million, no debt, access to $125 million (expandable to $175 million) through credit facility

ROYALTY PORTFOLIO
Continued growth in 2024

- Portfolio today includes 12 major commercial stage royalty assets, partnered with premier global marketers (e.g., Amgen, Merck, Sanofi)
- Merck's V116 – approved as Capvaxive® on June 17, 2024
- Verona's ensifentrine – approved as Ohtuvayre™ on June 26, 2024

BUSINESS DEVELOPMENT
Highly productive, rigorous process

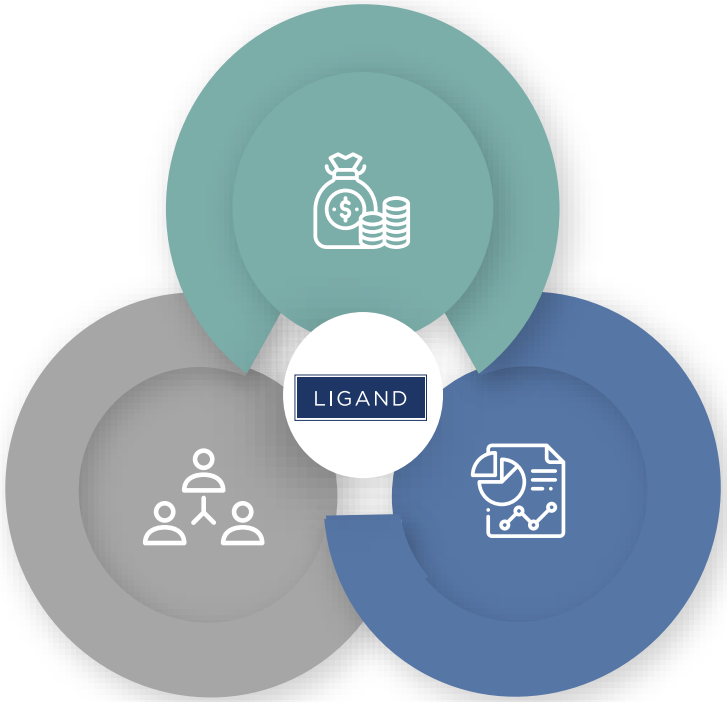
- April: Launch of Pelthos Therapeutics to accelerate commercialization of Zelsuvmi™
- May : Agenus royalty monetization & project finance investment
- July : Apeiron acquisition, provides royalty rights to Qarziba®

STRATEGIC DIFFERENTIATION
Financials, advantage, team

- Long-term royalty revenue CAGR >22%, adjusted EPS>25%
- Inefficient market with inexhaustible demand for capital
- Track record of accomplishments, building a diversified portfolio

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Ligand Strategic Differentiation



STRONG FINANCIALS

High-margin / high-growth strategy

Superior P&L, low op-ex with lean operations, high profits per employee

Predictable and diversified growth

ADVANTAGEOUS STRATEGY

High Demand: Inefficient market with inexhaustible demand for capital

Superior Information: Extensive due diligence and information available under confidentiality vs. public equity investing

Flexible Structures: Customized investment structures with non-dilutable interests

Exclusivity: Create vs. compete for deals. Novel tactics / structures enable high volume of sourcing and high investment selectivity

Scalable: Only limitations to growth are execution and access to capital

EXPERIENCED TEAM

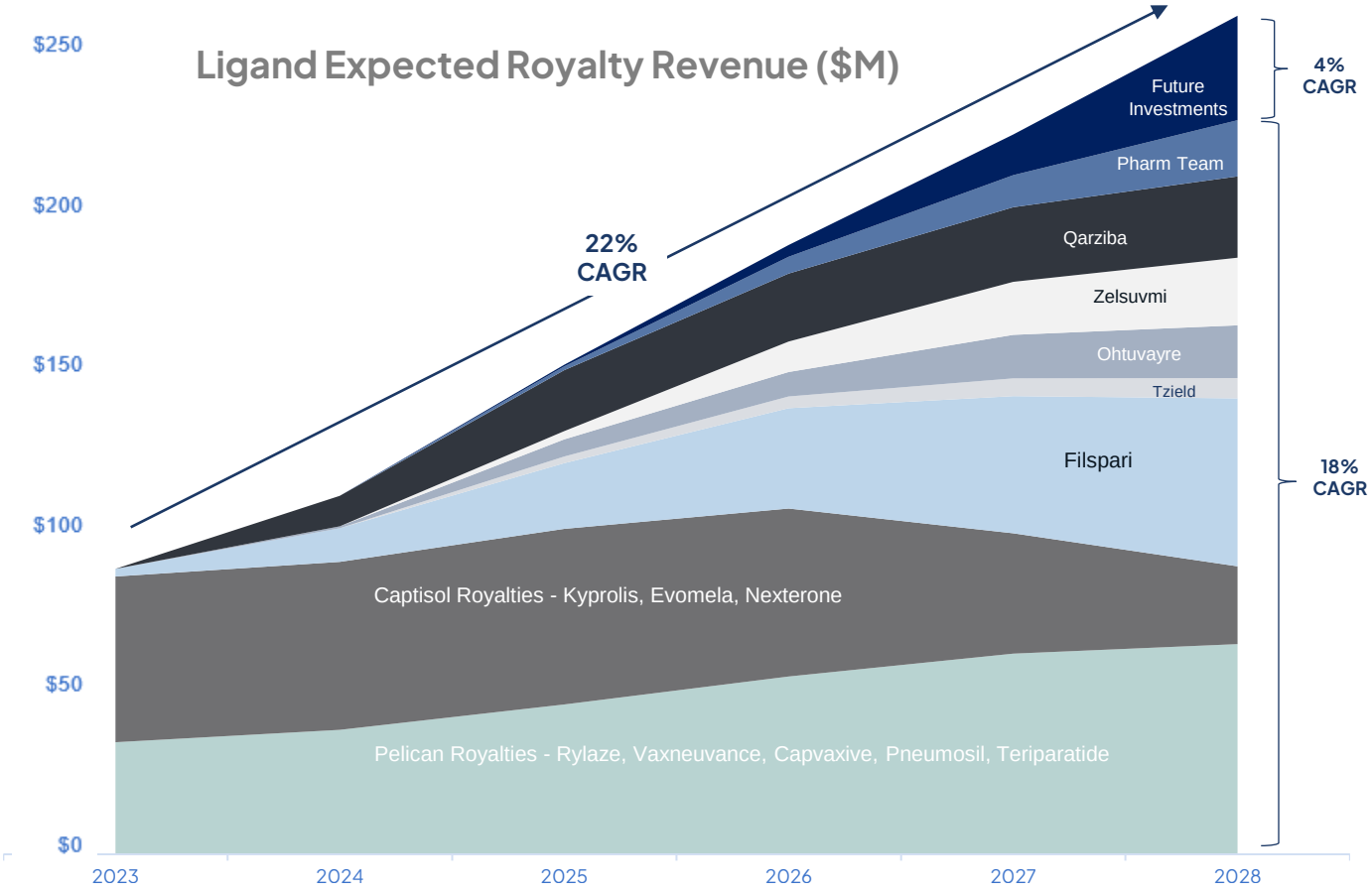
Track record of accomplishments, building a diversified portfolio

Looking Ahead To 2028

Expected Royalty Revenue CAGR >20%

Current portfolio of commercial and late-stage programs + new deals drive growth[1]

- 5-year royalty revenue outlook on pace to exceed 22% CAGR previously shared at analyst day in December 2023
- Existing commercial programs and late-stage pipeline ("Pharm Team") now support Royalty Revenue CAGR of 18% (above previous estimated 16% CAGR)
- Pharm Team includes Agenus' BOT/BAL, Viking's VK-2809, Palvella's PTX-022 and 15 other mid to late-stage programs
- Operating leverage gained from lean corporate cost structure results in an expected adjusted EPS > $10 per share in 2028



1. Sell-side consensus sales estimates used to arrive at royalty revenue from commercial programs.

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Leadership Team:
Differentiated Relationships & Biopharma Investment Experience

Deep network of biopharma relationships enable proprietary deal sourcing and rigorous due diligence

Management Team



Todd Davis
Chief Executive Officer



Tavo Espinoza
Chief Financial Officer



Andrew Reardon
Chief Legal Officer



Rich Baxter
SVP, Investment Operations



Paul Hadden
SVP, Investments and Business Development



Keith Marschke, Ph.D.
SVP, Biology and Scientific Affairs



Karen Reeves, M.D.
SVP, Investments and Head Clinical Strategy



Lauren Hay
VP Strategic Planning and Investment Analytics



Michael Vigilante
VP, Investments and Business Development

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Jason M. Aryeh
Director



Todd Davis
CEO & Director



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Director



Jason Haas
Director



John L. LaMattina, Ph.D.
Director



Stephen L. Sabba, M.D.
Director



Martine Zimmermann, Pharm.D.
Director

Ligand 12-Month Investment Activity

Transaction	Type	Amount Invested	Date
Primrose Bio	Spinout	$15M	Sep 2023
Novan / Pelthos	M&A + Spinout	$12M	Sep 2023
Ovid Therapeutics	Royalty Monetization	$30M	Oct 2023
Tolerance Therapeutics	M&A	$20M	Nov 2023
Palvella	Project Finance + Convertible Note	$7.5M	Dec 2023, Jul 2024
Agenus	Project Finance + Royalty Monetization	$75M	May 2024
Ohtuvayre Inventors	Royalty Monetization	$17M	Feb-Aug 2024
Apeiron Biologics	M&A	$100M	July 2024

$277 million in capital invested across 12 transactions during the past 12 months

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Apeiron Biologics AG Investment Overview

Provides royalty rights to Qarziba, marketed by Recordati & commercially available in >35 countries
Immediately accretive to Ligand EPS by ~$1.00 per share on an annualized basis

Transaction Highlights

Transaction Value	• $100M cash consideration upfront[1]
Qarziba Royalty Rate	• 15-20% of global net sales
Target IRR	• Expected equity like IRR return commensurate with commercial stage risk

Qarziba Overview

Indication	• High-risk pediatric neuroblastoma • Approved by the European Medicines Agency, preparing to file US BLA
Commercial Traction	• Commercially available in >35 countries • Recordati Oncology franchise growth of 23% H1 2023 to H2 2024 • 2024 Qarziba growth outpacing Recordati expectations
Marketer	• Recordati S.p.A., a publicly-listed global pharmaceutical company

1. Ligand will also pay Apeiron shareholders additional consideration based on future commercial and regulatory events including up to $28M if Qarziba royalties exceed certain predetermined thresholds by either 2030 or 2034 respectively.

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Portfolio Update: Ohtuvayre

During the past 6 months, Ligand purchased several inventor royalties for $17M in exchange for a nearly 1% incremental royalty

Total Ligand Ohtuvayre royalty just under 3% of net sales

Ohtuvayre™
(ensifentrine) Inhalation Suspension
3 mg/2.5 mL

Verona Pharma®
Breath of Innovation

Soticlestat Phase 3 Update

SKYLINE Study (Dravet Syndrome)

- **Narrowly missed primary endpoint of reduction in convulsive seizure frequency:**
  - p-value = 0.06
  - n = 144
- **Showed clinically meaningful effects on 4 key secondary endpoints (all p-values ≤ 0.008, nominal):**
  1. Responder rate
  2. Caregiver global impression
  3. Clinical global impression
  4. Seizure intensity and duration

SKYWAY Study (Lennox-Gastaut Syndrome)

- **Missed primary endpoint of reduction in major motor drop seizures:**
  - p-value not disclosed
  - n = 270

Safety & Tolerability

- Soticlestat was generally well tolerated in both studies
- Demonstrated safety consistent with previous studies

Path Forward:

- **Regulatory Path:** Takeda will review data with experts and look at subgroup analyses and totality of data, including pre-specified subgroups
- **Discuss Path Forward With FDA:** High unmet need, totality of data, safety & tolerability, subgroup analyses, voice of patient & caregivers

Agenus: Recent Updates Support Ligand's Thesis

- Agenus announced outcome of End-of-Phase-2 Meeting and new clinical data in July 2024
  - Agreement reached with the FDA on Phase 3 dose for the BOT/BAL combination
  - Accelerated approval pathway based on preliminary Phase 2 data discouraged by FDA (at this time)
- Preliminary, ongoing Phase 2 data tracks with Phase 1 BOT/BAL clinical activity in MSS mCRC NLM (ORR ~19.4% and 90% alive at 6 months)
  - KOL and confirmatory diligence conducted by Ligand consistently positive that BOT/BAL is a real step forward in Immuno-Oncology, (I/O) addressing unmet need in mCRC
- Encouraging early data in additional solid tumor types (e.g. Pancreatic, Neoadjuvant CRC)
- Agenus will most likely partner BOT/BAL to achieve global development plan ambitions
- Select partnered assets are being returning to Agenus. Ligand maintains economics if relicensed

Palvella Therapeutics Merger With Pieris Pharmaceuticals

Reverse merger and financing will create a Nasdaq listed company funded through 2H 2027



palvella THERAPEUTICS

Palvella Therapeutics and Pieris Pharmaceuticals Announce Definitive Merger Agreement

July 24, 2024

Proposed merger to create a Nasdaq-listed, clinical-stage biopharmaceutical company focused on developing and commercializing novel treatments for serious, rare genetic skin diseases for which there are no FDA-approved therapies

Combined company is expected to have approximately $80.5 million of cash and cash equivalents at closing, including approximately $78.9 million from an oversubscribed private financing with participation from a syndicate of leading healthcare-dedicated investors, which is expected to provide cash runway into the second half of 2027

Anticipated cash and cash equivalents are expected to fund combined company through multiple clinical trial milestones, including pivotal Phase 3 clinical trial results from a single-arm, baseline-controlled clinical trial of QTORIN™ 3.9% rapamycin anhydrous gel (QTORIN™ rapamycin) for the treatment of microcystic lymphatic malformations currently being conducted under FDA's Breakthrough Therapy Designation and Fast Track Designation programs

- July 24 – Palvella announced definitive merger agreement with Pieris Pharmaceuticals, Inc. (Nasdaq: PIRS)
  - Proposed merger will create a Nasdaq-listed, clinical-stage company to develop and commercialize novel treatments for serious, rare, genetic skin diseases
  - Concurrent financing of approximately $79M. Combined company funded through 2H 2027
- Lead Phase 3 program Qtorin™ rapamycin has Breakthrough Therapy Designation and the potential to be the first FDA approved therapy for microcystic lymphatic malformations and cutaneous venous malformations
- Ligand originally partnered with Palvella in 2018; eligible to receive 8-9.8% tiered royalties on Qtorin rapamycin worldwide sales, as well as a future option on additional candidates

Current Investment Pipeline

Pipeline Volume

Ligand has a significant number of investment opportunities in the pipeline

The team is currently reviewing ~25 potential investments, totaling in excess of $1B investment opportunity

Therapeutic Areas

Potential investments span more than 10 different therapeutic areas

Investment Structures

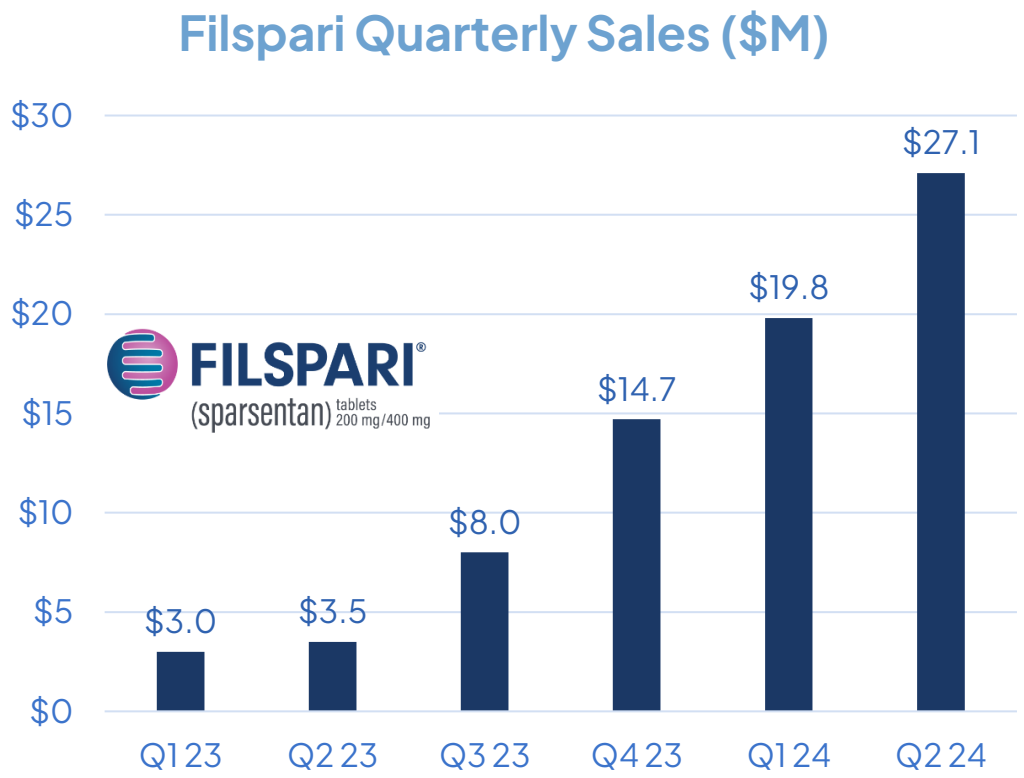
The pipeline comprises a diverse mix of investment structures:

Royalty Monetization
Project Finance
M&A

Ligand has a robust pipeline of opportunities spanning therapeutic categories and investment structures

Travere's Filspari – Significant Achievements in 2024

- Filspari is the first and only non-immunosuppressive approved for treatment of IgA nephropathy (IgAN)
  - Received accelerated approval in February 2023 for IgAN
  - Received Conditional Marketing Authorization in Europe for IgAN in April
  - Submitted sNDA for full approval in IgAN, expected PDUFA date September 5
- IgAN patient population currently has limited treatment options
  - Estimated 150k patients in US, similar number of patients in the EU
- KDIGO guidelines are anticipated for treatment in 2024
- Q2 2024 sales of $27.1M, an increase of 37% from Q1

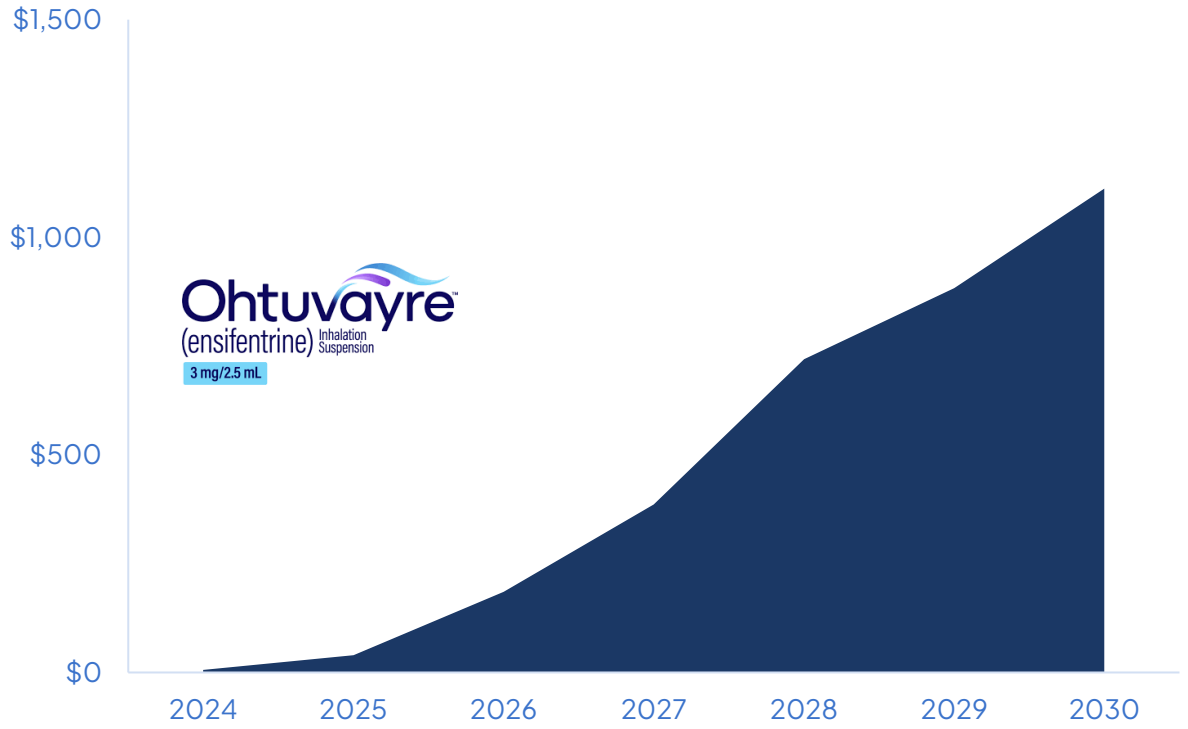


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Portfolio Update: Ohtuvayre for COPD

- Ohtuvayre was approved by the FDA on June 26, 2024
- Ligand purchased inventor royalties for $17M in exchange for a ~1% royalty
- Ohtuvayre's approval came with a broad label for the maintenance treatment of COPD in adults, with no restrictions or limitations on background therapies or patient segments
- Verona plans to launch Ohtuvayre in Q3 2024 with ~120 field personnel at a WAC of $2,950/month

Ohtuvayre Analyst Projections ($M)



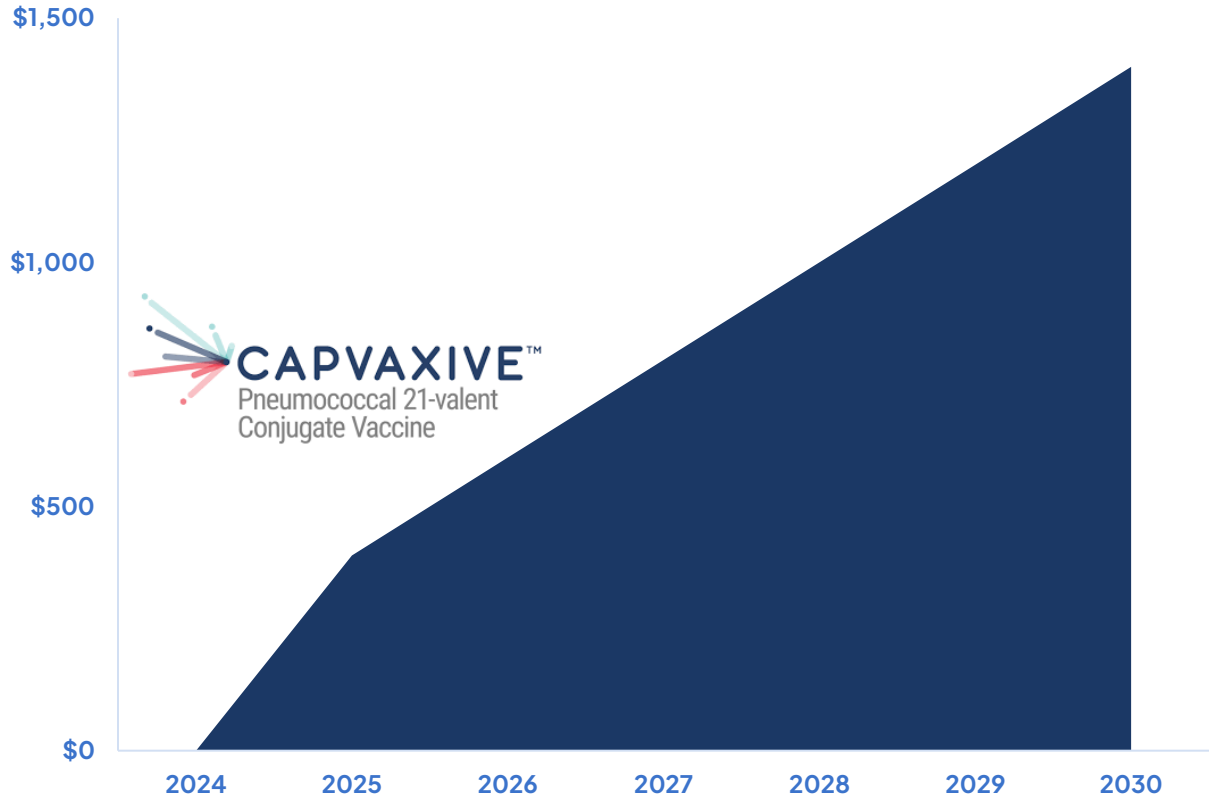
- **Significant $10.5B US addressable market opportunity for Ohtuvayre at launch**
- **Peak US annual sales estimated to reach ~$1–1.5B**

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Portfolio Update: Capvaxive vaccine

- 21-valent pneumococcal vaccine designed specifically for adults and approved in June 2024 in individuals 18 years of age and older
- In their latest Q2 2024 earnings call, Merck stated, "Given its compelling clinical profile, we expect that Capvaxive will achieve a majority market share in the adult setting"
- ACIP unanimously recommended Capvaxive for all adults aged 65+ and adults aged 19-64 with underlying conditions who have not received a previous vaccination
  - This ACIP recommendation matches that of PCV20
- ACIP is expected to revisit recommendations for use of both Capvaxive and PCV20 in all adults ages 50-64 at its October meeting

Capvaxive Analyst Projections ($M)



- **Estimated global peak sales of ~$1.5B**

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Q2 '24 Financial Highlights

Total Revenue

$41.5M

58% increase vs Q2 2023

Royalty Revenue

$23.2M

11% increase vs Q2 2023

Core Adjusted EPS**

$1.40

109% increase vs Q2 2023

Deployable Capital

>$350M

$227M in cash and investments* plus $125M credit facility

** 226.9M in cash and investments as of June 30, 2024*
***See non-GAAP reconciliation in the second quarter 2024 earnings press release.*

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Q2 '24 Financial Performance

$ in millions, except for per share amounts	Three Months Ended June 30,	
	2024	**2023**
Revenues and other income:		
Royalties	$23.2	$20.9
Captisol	7.5	5.2
Contract revenue and other income	10.9	0.2
Total revenues and other income	**41.5**	**26.4**
Costs and expenses:		
Cost of Captisol	2.9	1.7
Amortization of intangibles	8.3	8.5
R&D expense	5.4	6.9
G&A expense	17.6	11.3
Financial royalty assets impairment	26.5	-
Total Operating Expenses	**60.6**	**28.3**
GAAP Operating loss	(19.1)	(2.0)
(Loss) gain from short-term of investments	(14.3)	4.0
Other (expenses) income	(32.0)	1.2
Income tax benefit (expense)	13.5	(0.9)
GAAP net (loss) income from Cont. Ops	(51.9)	2.3
Non-GAAP net income	$25.8	$25.1
Core Non-GAAP net income*	**$25.8**	**$11.7**
GAAP Diluted EPS	$(2.88)	$0.13
Non-GAAP Diluted EPS	$1.40	$1.42
Core Non-GAAP Diluted EPS*	**$1.40**	**$0.66**

- Increase in total revenue driven by milestones earned with the approvals of Filspari in Europe and Ohtuvayre and Capvaxive in the US
- Royalty revenue growth driven by increase in sales of Filspari. Travere reported Q2 2024 Filspari sales of $27.1 million versus $3.5 million in Q2 2023
- Decrease in R&D expense driven by lower headcount expenses resulting from prior year Pelican spin-out
- Increase in G&A expense driven by costs associated with incubating the Pelthos business
- Results from Takeda's SKYLINE study of soticlestat result in ~$26 million financial royalty asset impairment
- Increase in Other expenses driven by reduction in carrying value of Ligand's investment in Primrose Bio

*Excludes gains from sale of VKTX stock in the second quarter of 2023. No sales of VKTX stock in the second quarter of 2024. *See non-GAAP reconciliation in the second quarter 2024 earnings press release.*

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Ligand 2024 Financial Guidance – Updated July 8th, 2024

	2023 Reported Results	2024 Prior Guidance	2024 Updated Guidance	Guidance Change[2] (%)	YoY Growth[3] (%)
Royalty Revenue	$84M	$90 - 95M	$100 - 105M	+$10M (11%)	
Captisol Sales	$28M	$25 - 27M	$25 - 27M	–	
Contract Revenue	$19M	$15 - 20M	$15 - 25M	$2.5M (14%)	
Total Core Revenue	$131M	$130 - 142M	$140 - 157M	+$12.5M (9%)	+$17.5M (13%)
Adjusted Core EPS[1]	$4.06	$4.25 - 4.75	$5.00 - 5.50	+$0.75 (17%)	+$1.19 (29%)

- **Reflects Apeiron acquisition and milestone payments on approval and first commercial sale of Ohtuvayre**

1. Excludes gains from short-term investments on the sale of Viking Therapeutics stock.
2. Calculated using midpoint of guidance range.
3. Calculated using 2023 YE figures vs 2024 updated FY guidance.

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Q&A

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