

US Biopharmaceuticals

PVRI presentations highlight treatment innovation in PAH space

Industry Overview

L606 PK supports potential for improved profile

With the Pulmonary Vascular Research Institute 2024 Annual Congress (PVRI) ongoing, we highlight updates from companies in our coverage who are dedicated to developing and ultimately commercializing new treatments in the PH space, including Liquidia and Keros. Liquidia presented an encouraging poster focusing on the pharmacokinetics of L606, an extended-release inhaled liposomal treprostinil, in development for the treatment of PAH and PH-ILD. The poster showed sustained plasma levels of L606 up to 12 hours, supporting the twice daily administration profile. When compared to Tyvaso (54 µg), a single dose of L606 (51 µg) administered by a vibrating-mesh nebulizer resulting in a similar systemic exposure, significantly reduced peak plasma concentration, and increased apparent half-life. As an extended-release treatment, we think L606 dosing could be advantageous compared to other treatments in the space including Tyvaso DPI/ Tyvaso nebulizer (4x daily). With a phase 3 trial evaluating L606 in PH-ILD expected to initiate in late 2024 and on ongoing open-label study in PAH/PH-ILD patients transitioning from Tyvaso, we look for continued derisking clinical data to support approval in PAH and PH-ILD. Maintain Buy on Liquidia, PO \$15.

Looking for enrollment progress in TROPOS trial

Keros also presented three posters at the PVRI conference, including a presentation of the trial design and rationale of the ongoing TROPOS trial along with a review of phase 1 healthy participant data. TROPOS is a randomized, double-blind, placebo-controlled, global phase 2 study evaluating KER-012 in combination with background therapy in patients with PAH. The company is evaluating KER-012 via the primary endpoint of change from baseline in PVR and key secondary endpoints of KER-012 on exercise capacity. As we look for future data and an enrollment update in 1H24, we think the poster highlights the effective trial design to highlight the potential clinical benefit of KER-012 in PAH. Maintain Buy, PO \$66.

Further analyses of KER-012 supports innovative strategy

Keros also presented analyses highlighting the therapeutic strategy of KER-012, including a study in healthy post-menopausal women where treatment with KER-012 (N=6) showed signs of anti-inflammatory and anti-fibrotic effects. In addition, the company presented preclinical analyses of KER-012 highlighting the potential to treat PAH utilizing a PAH rat model. The experiments showed reduced markers of endothelial dysfunction and markers corresponding to reduced RV hypertrophy. KER-012 is designed to inhibit TGF-beta ligands including activin A activin B and myostatin to increase BMP signaling and treat diseases including PAH. Overall we think the analyses today support further study of KER-012 as a treatment for PAH.

See our catalyst calendar below (Exhibit 1):

02 February 2024

Equity
United States
Biopharmaceuticals

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PH: pulmonary hypertension

PAH: pulmonary arterial hypertension

PH-ILD: pulmonary hypertension and
interstitial lung disease

DPI: dry powder inhaler

PVR: pulmonary vascular resistance

RV: right ventricle

PK: pharmacokinetics

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Timestamp: 02 February 2024 05:13PM EST

Exhibit 1: Catalyst Calendar

We anticipate a launch of Yutrepia in 2024.

Company	Asset	Indication	Event	Timing	Importance
Keros	KER-050	MDS	Complete phase 2 TD enrollment	1H24	Low
Keros	KER-012	Chronic heart failure	Initial data from phase 2 trial	2H24	High
Keros	KER-012	PAH	Update on enrollment of TROPOS	1H24	Moderate
Keros	KER-050	MDS	Additional data from Ph2 part 2 MDS trial	2Q and 4Q24	High
Keros	KER-050	MF	Additional data from Ph2 MF trial	2Q and 4Q24	High
Keros	KER-065	Obesity/ neuromuscular	Phase 1 proof of concept data	1Q25	High
Liquidia	Yutrepia	PAH	Anticipated launch	2024	High
Liquidia	L606	PH-ILD	Initiate PH-ILD trial	1H24	Low

Source: BofA Global Research, company reports

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Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
KROS	KROS US	Keros	US\$ 53.02	C-1-9
LQDA	LQDA US	Liquidia Corporation	US\$ 13.58	C-1-9

Source: BofA Global Research

Price objective basis & risk**Keros (KROS)**

Our \$66/share price objective is based on a probability adjusted (20%-50%) net present value (NPV) analysis of its program under development. We use a weighted-average cost of capital (WACC) of 15%, similar to other early-stage companies in our coverage universe, and a terminal growth rate of -5%. Given these assumptions we estimate a value of \$38/sh for KER-050 in MDS, \$3/sh for KER-050 in MF, \$6/sh in KER-050 royalties, \$10/sh in KER-012, and \$9/sh in net cash.

Upside risks are better than expect data in clinical trials including MDS/MF patients treated with KER-050 which could lead to higher than anticipated usage if approved.

Downside risks are unexpected safety signals, clinical trial failures, and competitors releasing stronger data.

Liquidia Corporation (LQDA)

Our \$15/share price objective is based on an net present value (NPV) analysis of Yutrepia (\$12/share), collaboration revenues (\$2/share), and net cash (\$1/share). We use a weighted average cost of capital (WACC) of 13%, in line with similar companies in our coverage universe and a -50% terminal growth rate.

Downside risks: 1) additional competition in the market, 2) delayed full approval of Yutrepia.

Upside risk: 1) higher-than-expected uptake of Yutrepia once approved

Analyst Certification

I, Greg Harrison, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Biopharmaceuticals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
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	Acumen Pharma	ABOS	ABOS US	Geoff Meacham
	Agios Pharmaceuticals	AGIO	AGIO US	Greg Harrison, CFA
	Amylyx Pharmaceuticals	AMLX	AMLX US	Geoff Meacham
	BioMarin	BMRN	BMRN US	Geoff Meacham
	BioXcel Therapeutics	BTAI	BTAI US	Greg Harrison, CFA
	BridgeBio Pharma	BBIO	BBIO US	Greg Harrison, CFA
	Caribou	CRBU	CRBU US	Geoff Meacham
	CRISPR Therapeutics	CRSP	CRSP US	Geoff Meacham
	Eli Lilly and Company	LLY	LLY US	Geoff Meacham
	Gilead Sciences Inc.	GILD	GILD US	Geoff Meacham
	HUTCHMED	HCM	HCM US	Alec W. Stranahan
	Immatics	IMTX	IMTX US	Alec W. Stranahan
	Insmid Incorporated	INSM	INSM US	Jason Zemansky
	Intellia Therapeutics	NTLA	NTLA US	Greg Harrison, CFA
	Janux Therapeutics	JANX	JANX US	Geoff Meacham
	Keros	KROS	KROS US	Greg Harrison, CFA
	Kiniksa Pharmaceuticals, Ltd.	KNSA	KNSA US	Geoff Meacham
	Krystal Biotech	KRYS	KRYS US	Alec W. Stranahan
	Kura Oncology	KURA	KURA US	Jason Zemansky
	Liquidia Corporation	LQDA	LQDA US	Greg Harrison, CFA
	Lyell Immunopharma	LYEL	LYEL US	Geoff Meacham
	MeiraGTx	MGTX	MGTX US	Alec W. Stranahan
	Merck & Co.	MRK	MRK US	Geoff Meacham
	Mineralys Therapeutics	MLYS	MLYS US	Greg Harrison, CFA
	Neumora Therapeutics	NMRA	NMRA US	Geoff Meacham
	Rani Therapeutics	RANI	RANI US	Geoff Meacham
	Regenxbio, Inc.	RGNX	RGNX US	Alec W. Stranahan
	Revolution Medicines	RVMD	RVMD US	Alec W. Stranahan
	Rocket Pharmaceuticals, Inc.	RCKT	RCKT US	Greg Harrison, CFA
	Royalty Pharma	RPRX	RPRX US	Geoff Meacham
	Sana Biotechnology	SANA	SANA US	Geoff Meacham
	SpringWorks	SWTX	SWTX US	Alec W. Stranahan
	Syndax Pharmaceuticals	SNDX	SNDX US	Jason Zemansky
	Traverse Therapeutics Inc	TVTX	TVTX US	Greg Harrison, CFA
	Turnstone Biologics	TSBX	TSBX US	Geoff Meacham
	Vertex Pharmaceuticals Inc.	VRTX	VRTX US	Geoff Meacham
	Werewolf Therapeutics	HOWL	HOWL US	Jason Zemansky
	Xencor	XNCR	XNCR US	Alec W. Stranahan
NEUTRAL				
	AbbVie	ABBV	ABBV US	Geoff Meacham
	Alector, Inc	ALEC	ALEC US	Greg Harrison, CFA
	Amgen Inc.	AMGN	AMGN US	Geoff Meacham
	Arcus Biosciences	RCUS	RCUS US	Jason Zemansky
	Beam Therapeutics	BEAM	BEAM US	Greg Harrison, CFA
	Biogen Inc.	BIIB	BIIB US	Geoff Meacham
	Bristol-Myers Squibb	BMJ	BMJ US	Geoff Meacham
	Cytokinetics, Incorporated	CYTK	CYTK US	Jason Zemansky
	Editas Medicine	EDIT	EDIT US	Greg Harrison, CFA
	Erasca	ERAS	ERAS US	Alec W. Stranahan
	Esperion	ESPR	ESPR US	Jason Zemansky
	Exscientia	EXAI	EXAI US	Alec W. Stranahan
	IGM Biosciences	IGMS	IGMS US	Greg Harrison, CFA
	Johnson & Johnson	JNJ	JNJ US	Geoff Meacham
	Kymira Therapeutics	KYMR	KYMR US	Geoff Meacham
	Moderna	MRNA	MRNA US	Geoff Meacham
	Pfizer	PFE	PFE US	Geoff Meacham
	Recursion Pharmaceuticals, Inc.	RXR	RXR US	Alec W. Stranahan
	Tyra Biosciences	TYRA	TYRA US	Greg Harrison, CFA
	Vir	VIR	VIR US	Geoff Meacham
	Y-mAbs Therapeutics, Inc	YMAB	YMAB US	Alec W. Stranahan
UNDERPERFORM				
	AlloVir, Inc.	ALVR	ALVR US	Jason Zemansky

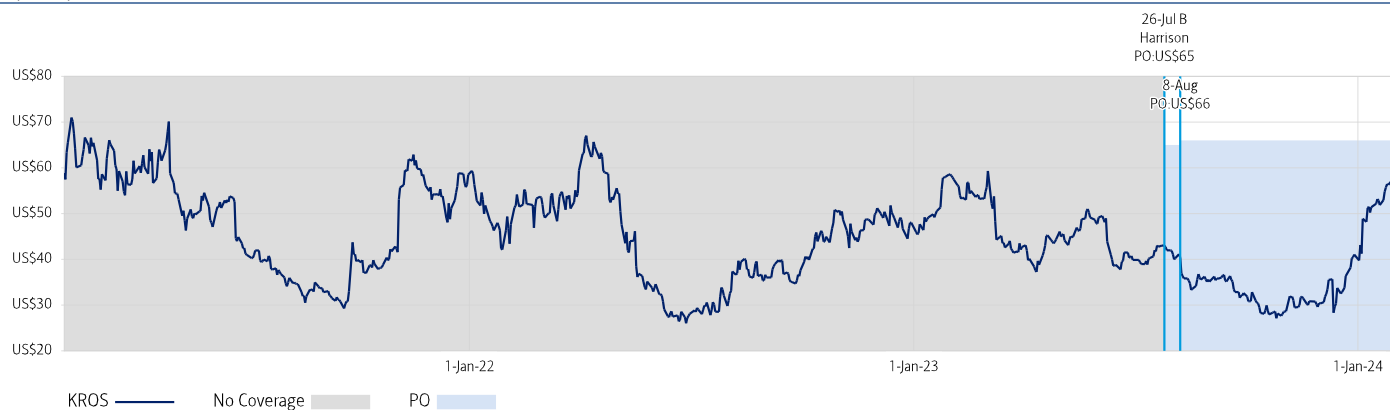
US - Biopharmaceuticals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	CureVac	CVAC	CVAC US	Geoff Meacham
	Day One Biopharmaceuticals	DAWN	DAWN US	Alec W. Stranahan
	LianBio	LIAN	LIAN US	Geoff Meacham
	Novavax	NVAX	NVAX US	Alec W. Stranahan
	Regeneron Pharmaceuticals Inc.	REGN	REGN US	Geoff Meacham
	Reneo Pharmaceuticals	RPHM	RPHM US	Jason Zemansky
	TG Therapeutics	TGTX	TGTX US	Alec W. Stranahan
	United Therapeutics Corporation	UTHR	UTHR US	Greg Harrison, CFA

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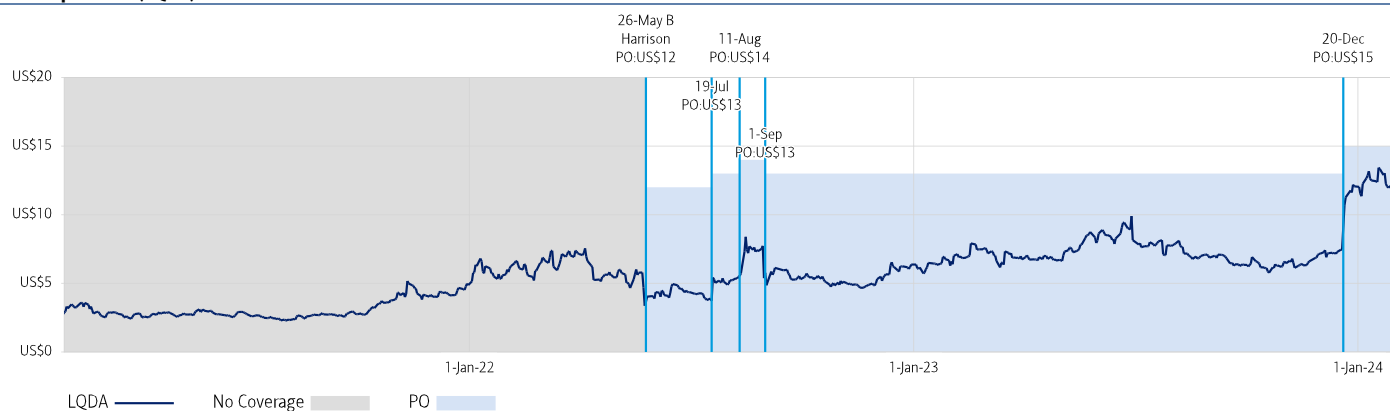
Keros (KROS) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Liquidia Corporation (LQDA) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Equity Investment Rating Distribution: Health Care Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	234	60.94%	Buy	115	49.15%
Hold	80	20.83%	Hold	36	45.00%
Sell	70	18.23%	Sell	29	41.43%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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