

US Biopharmaceuticals

ASH Update: Monday Sessions

Industry Overview

We are attending ASH 2023 and highlight key updates from our coverage including Agios, Editas, IGM Bio, and Keros. We discuss the relevant presentations from Monday. See [our weekend takeaways here](#) and updates from Monday below:

Agios analyst event highlights

Agios hosted an analyst event to discuss the many presentations from a busy ASH for the company. After the presentation of the phase 2 portion of the RISE-UP study of mitapivat in sickle cell disease (SCD), the program appears to us to be a viable treatment, with management having the goal of making mitapivat a foundational therapy in SCD. The other focus of the event was the thalassemia program for mitapivat, where pivotal data will be announced in 1H24. In our view, thalassemia is an attractive market for mitapivat, allowing Agios to expand into a larger population, and the potential for transfusion dependent beta-thal approval would be differentiating as would the ability to treat the rarer alpha thalassemia patients. Maintain Buy and \$37 PO.

Editas data looks solid against a high bar

Editas reported an update (Abstract #4996) of the RUBY trial of EDIT-301 (reni-cel) in SCD and the EdiThal trial in beta-thalassemia, with data continuing to look solid. In RUBY, all patients remain free of VOCs post treatment and importantly have all reached normal hemoglobin levels. In EdiThal, all patients are above the transfusion dependence threshold. We think the hemoglobin response is encouraging, however the bar set by CRISPR/Vertex (covered by Geoff Meacham) is quite high, and it remains to be seen how differentiated the reni-cel will be, though we see a place for multiple curative intent therapies in SCD. Maintain Neutral and \$13 PO.

IGM Bio demonstrates low CRS in vitro in AML

IGM Bio presented Abstract #4177, illustrating the in vitro activity of IGM-2537, a bispecific CD123xCD3 antibody in acute myeloid leukemia cells (AML). IGM-2537 showed activity against AML cells with limited cytokine release and sparing healthy cells. Despite the recent [prioritization of the colon cancer and autoimmune programs \(see report\)](#), we view the update for IGM-2537 as indicative of IGM Bio's potential to treat a broad range of oncology and autoimmune disorders. Maintain Buy and \$20 PO.

Keros shows potential for KER-050 differentiation

Adding to the body of data for the KER-050 myelofibrosis (MF) program, Keros presented Abstract #4524 on a mouse model of MF showing increases in red blood cell parameters in treated mice including hemoglobin, RBCs, and hematocrit. In addition, treatment with RKER-050 mitigated anemia induced by concurrent ruxolitinib treatment. We expect an update in humans in MF in mid-2024. Keros also held a call to discuss KER-050 updates from the conference. While shares were weak post the update, likely due to the reduced response rate in RS- patients, there is rationale for this phenomenon in that sicker patients with work prognostic indicators at baseline were enrolled towards the end of the trial. See [our thoughts on the data here](#). Maintain Buy and \$66 PO.

12 December 2023

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United States
Biopharmaceuticals

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ASH: American Society of
Hematology

VOC: vaso-occlusive crisis

RBC: red blood cell

RS: ring sideroblast

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Timestamp: 12 December 2023 05:16PM EST

Exhibit 1: Stock Mentioned

Stock ratings and prices mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
AGIO	AGIO US	Agios	US\$ 22	C-1-9
EDIT	EDIT US	Editas	US\$ 9.84	C-2-9
IGMS	IGMS US	IGM Biosciences	US\$ 5.97	C-1-9
KROS	KROS US	Keros	US\$ 29.66	C-1-9

Source: BofA Global Research

BofA GLOBAL RESEARCH

Price objective basis & risk

Agios Pharmaceuticals (AGIO)

Our \$37/share price objective is based on a probability-adjusted (40-100%) net present value (NPV) analysis of 1 commercial program and 2 programs under development. We use a weighted-average cost of capital (WACC) of 13%, similar to other commercial companies in our coverage universe and a -25% terminal growth rate. Given these assumptions, we estimate a value of \$6/share for PKD, \$8/share for thalassemia, \$3/share for SCD, \$5/share for Pyrukynd ex-US royalties, and \$15/share for net cash.

Downside risks: 1) soft market uptake, 2) dangerous safety signals, 3) superior competitor data.

Editas Medicine (EDIT)

Our \$13 share price objective is based on a probability adjusted (50%) net present value (NPV) analysis of, EDIT-301 in SCD/TDT (\$6/share), \$2/share in platform value, and net cash (\$5/share). We use a weighted-average cost of capital (WACC) of 15%, similar to other early-stage companies in our coverage universe and a -2% terminal growth rate.

Upside risks: higher-than-anticipated uptake of approved products, better-than-expected clinical trial results.

Downside risks: unexplained safety signals, clinical trial failures, and strong data from competitors.

IGM Biosciences (IGMS)

Our price objective of \$20 is based on a probability adjusted (15-20%) NPV analysis of IGM-2323 in SLE/RA (\$9/sh), IGM-8444 in mCRC (\$5/sh), and net cash (\$5/sh). We use a WACC of 15% similar to other early-stage companies in our coverage universe and a -2% terminal growth rate.

Upside risks are better than expected data in clinical programs including better efficacy or safety in IGM-2323 compared to other companies, which could lead to higher than expected usage if approved. Also positive clinical trial results in clinical and preclinical programs.

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

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.

Analyst Certification

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US - Biopharmaceuticals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	89bio, Inc	ETNB	ETNB US	Geoff Meacham
	Acumen Pharma	ABOS	ABOS US	Geoff Meacham
	Agios Pharmaceuticals	AGIO	AGIO US	Greg Harrison, CFA
	AlloVir, Inc.	ALVR	ALVR US	Jason Zemansky
	Amylyx Pharmaceuticals	AMLX	AMLX US	Geoff Meacham
	Beam Therapeutics	BEAM	BEAM US	Greg Harrison, CFA
	BioMarin	BMRN	BMRN US	Geoff Meacham
	BioXcel Therapeutics	BTAI	BTAI US	Greg Harrison, CFA
	BridgeBio Pharma	BBIO	BBIO US	Greg Harrison, CFA
	Bristol-Myers Squibb	BMJ	BMJ US	Geoff Meacham
	Caribou	CRBU	CRBU US	Geoff Meacham
	CRISPR Therapeutics	CRSP	CRSP US	Geoff Meacham
	Eli Lilly and Company	LLY	LLY US	Geoff Meacham
	Erasca	ERAS	ERAS US	Alec W. Stranahan
	Esperion	ESPR	ESPR US	Jason Zemansky
	Exscientia	EXAI	EXAI US	Alec W. Stranahan
	Gilead Sciences Inc.	GILD	GILD US	Geoff Meacham
	HUTCHMED	HCM	HCM US	Alec W. Stranahan
	IGM Biosciences	IGMS	IGMS US	Greg Harrison, CFA
	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
	Kymira Therapeutics	KYMR	KYMR US	Geoff Meacham
	LianBio	LIAN	LIAN US	Geoff Meacham
	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
	Reneo Pharmaceuticals	RPHM	RPHM US	Jason Zemansky
	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
	Tyra Biosciences	TYRA	TYRA US	Greg Harrison, CFA
	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
	Biogen Inc.	BIIB	BIIB US	Geoff Meacham
	Cytokinetics, Incorporated	CYTK	CYTK US	Jason Zemansky
	Editas Medicine	EDIT	EDIT US	Greg Harrison, CFA
	Johnson & Johnson	JNJ	JNJ US	Geoff Meacham
	Moderna	MRNA	MRNA US	Geoff Meacham
	Pfizer	PFE	PFE US	Geoff Meacham
	Recursion Pharmaceuticals, Inc.	RXR	RXR US	Alec W. Stranahan
	Revolution Medicines	RVMD	RVMD US	Alec W. Stranahan
	Vir	VIR	VIR US	Geoff Meacham

US - Biopharmaceuticals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Y-mAbs Therapeutics, Inc	YMAB	YMAB US	Alec W. Stranahan

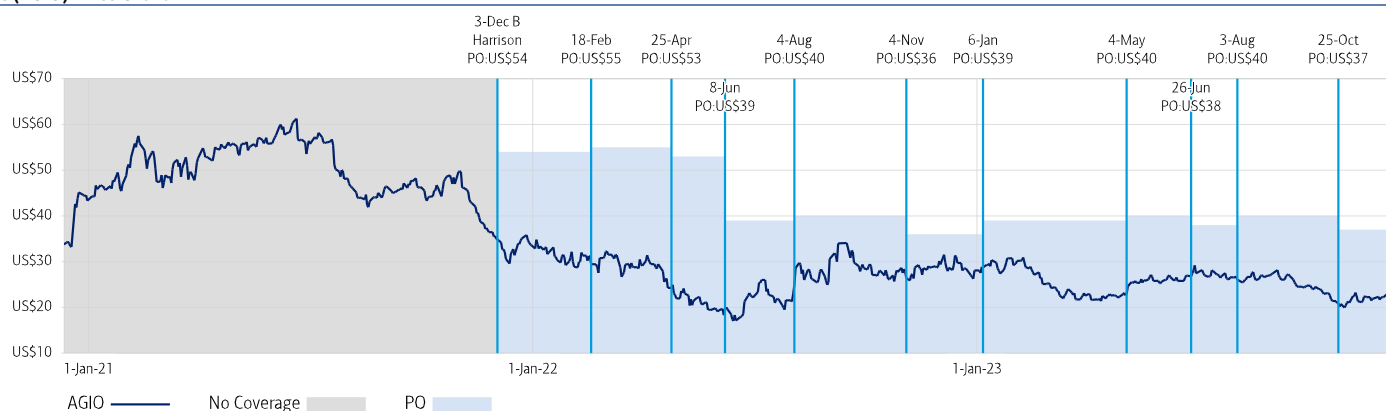
UNDERPERFORM

	CureVac	CVAC	CVAC US	Geoff Meacham
	Day One Biopharmaceuticals	DAWN	DAWN US	Alec W. Stranahan
	Novavax	NVAX	NVAX US	Alec W. Stranahan
	Regeneron Pharmaceuticals Inc.	REGN	REGN US	Geoff Meacham
	TG Therapeutics	TGTX	TGTX US	Alec W. Stranahan
	United Therapeutics Corporation	UTHR	UTHR US	Greg Harrison, CFA

Disclosures

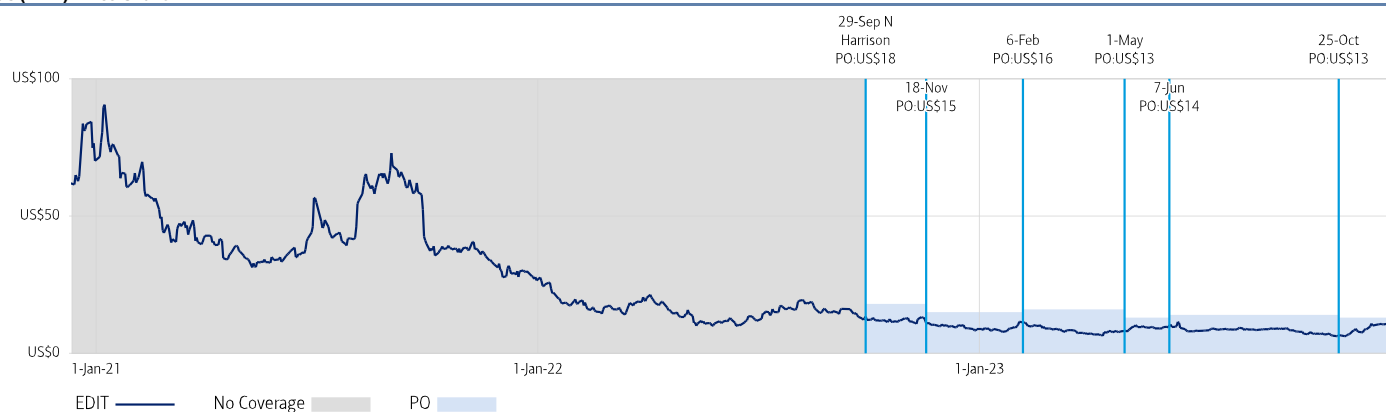
Important Disclosures

Agius (AGIO) Price Chart



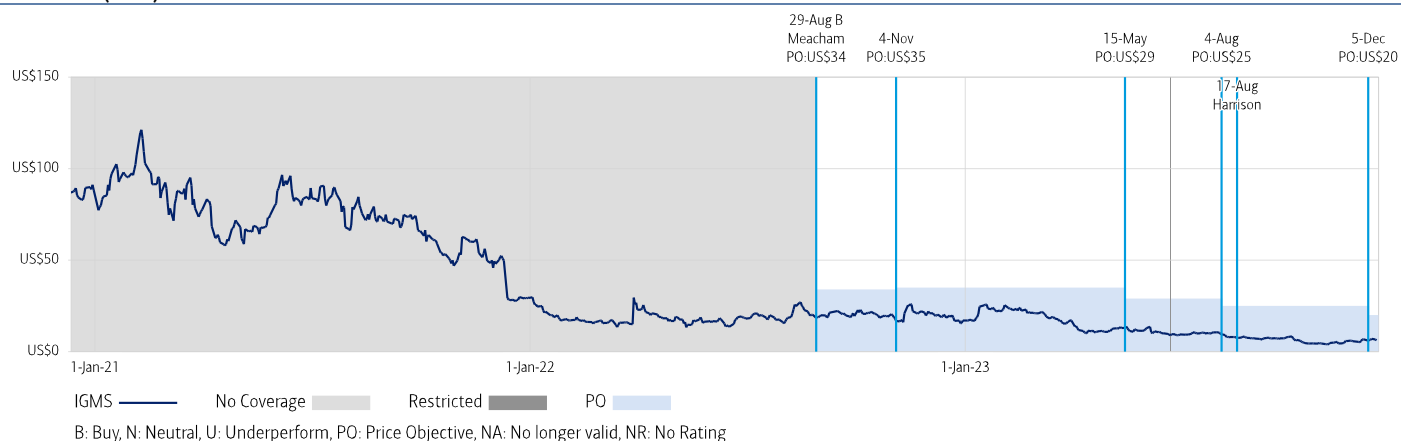
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Editas (EDIT) Price Chart



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IGM Biosciences (IGMS) Price Chart



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Keros (KROS) Price Chart



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Equity Investment Rating Distribution: Health Care Group (as of 30 Sep 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	233	60.21%	Buy	113	48.50%
Hold	83	21.45%	Hold	33	39.76%
Sell	71	18.35%	Sell	25	35.21%

Equity Investment Rating Distribution: Global Group (as of 30 Sep 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1869	53.48%	Buy	1046	55.97%
Hold	828	23.69%	Hold	461	55.68%
Sell	798	22.83%	Sell	370	46.37%

^{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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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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