Interim Analysis of a Multi-Center 24-Week, Double-Blind, Randomized, Placebo-Controlled Phase 2 Study of Aldafermin 1 mg in Patients with Biopsy-Proven NASH

Novel Biology. Powerful Medicines. Transformative Impact.

October 7, 2019

NGMBio

Next Generation Medicines

Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995, as amended. These forward-looking statements involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including statements regarding our future financial condition, results of operations, business strategy and plans, expected near-term milestones, and objectives of management for future operations, as well as statements regarding industry trends, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially” “predict,” “should,” “will” or the negative of these terms or other similar expressions. These statements include those related to the timing, enrollment and results of clinical studies of aldafermin, the safety, tolerability and potential efficacy of aldafermin, and NGM’s advancement of its clinical and preclinical pipeline. Because such statements deal with future events and are based on NGM’s current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of NGM could differ materially from those described in or implied by the statements in this presentation. These forward-looking statements are subject to risks and uncertainties, including those discussed in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in quarterly report on Form 10-Q for the quarter ended June 30, 2019 and other filings that we make from time to time with the Securities and Exchange Commission. Except as required by law, NGM assumes no obligation to update these forward-looking statements after the date of this presentation, or to update the reasons if actual results differ materially from those anticipated in the forward-looking statements.

Summary of the Interim Analysis of Cohort 4: 24-week Placebo-Controlled Study of Aldafermin 1 mg

- Robust effect observed across all measures of disease at 24 weeks, consistent with what we observed in our prior 12 week cohorts
- 24-week exposure with 1 mg aldafermin was well tolerated with no serious adverse events and no withdrawals in the drug treatment arm
- Strong differentiation as monotherapy as demonstrated by rapid and profound metabolic improvement, reduction of liver inflammation and reversal of fibrosis
- On track to report on translation of these longer term non-invasive data when we report topline histology results from Cohort 4 in 1Q20

NASH Phase 2 Program Provides Foundation for Late Stage Development of Aldafermin

Clinical Data in Presentation

	COHORT 1	COHORT 2	COHORT 3	COHORT 4
Status	**Completed** (Published, *The Lancet* 2018)	**Completed** (Presented, EASL 2018)	**Completed** (Presented, AASLD 2018)	**Ongoing** (Anticipated topline data 1Q20)
Duration	12 Weeks			24 Weeks
Aldafermin Dose (# Patients)	Placebo (27); 3 mg (27); 6 mg (28)	0.3 mg (23); 1 mg (21); 3 mg (22)	1 mg (28)	Placebo (~25); 1 mg (~50)

HISTOLOGY (Biopsy)

NON-INVASIVE MEASURES

KEY ENDPOINTS/ Assessment Measures[1]

STEATOSIS

% Liver Fat Content (LFC) (MRI-PDFF)

INFLAMMATION

BALLOONING

ALT/AST (Biomarkers)

FIBROSIS

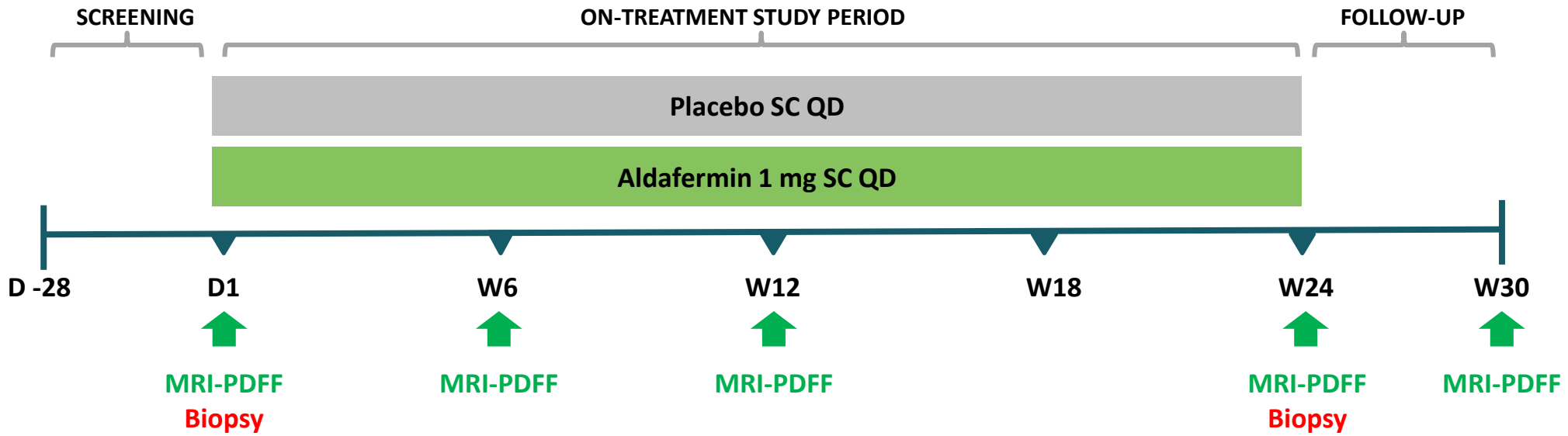
ELF/PRO-C3 (Biomarkers)

BILE ACIDS

C4[1] (Biomarker)

[1] *C4: 7α-hydroxyl-4-cholesten-3-one*

Cohort 4: A 24-Week, Double-Blind, Placebo-Controlled Multi-Center Ph2 Study of Aldafermin in Patients with Biopsy-Proven NASH



- 78 subjects randomized 2:1 to aldafermin 1 mg or placebo
- Key inclusion criteria include:
  - Biopsy confirmed NASH with NAS ≥4 (1 point in each component); stage 2 or 3 liver fibrosis (F2 or F3 by NASH CRN criteria);
  - Absolute liver fat content (LFC) ≥8% by MRI-PDFF;
  - ALT ≥ 19 IU/L in females, ALT ≥ 30 IU/L in males
- **Primary endpoint**: change from baseline in absolute LFC (as measured by MRI-PDFF) in subjects with histologically confirmed NASH after 24 weeks of treatment
- This pre-specified **interim analysis on MRI-PDFF and select biomarkers** was conducted when **38 subjects** completed Week 24 procedures
- Rosuvastatin (ROS 20 mg) started at W2 if LDL-C rise of 10 mg/dL observed
  - ROS dose titrated up to 40 mg at W4 to W8 if LDL-C remains above baseline

Interim Analysis: Patient Demographics and Baseline Characteristics

PARAMETERS MEAN (SD)	PLACEBO (N=13)	ALDAFERMIN 1 MG (N=25)
AGE (YEARS)	54.2 (11.4)	50.5 (12.7)
SEX (MALE/FEMALE)	7 / 6	10 / 15
WEIGHT (KG)	109.8 (32.6)	95.9 (19.7)
BMI (KG/M^2)	38.4 (9.4)	35.0 (5.8)
LIVER FAT CONTENT (% BY MRI-PDFF)	18.5 (6.8)	19.5 (6.5)
ALT (IU/L)	54.6 (20.4)	80.1 (43.5)
AST (IU/L)	44.2 (10.9)	60.5 (26.6)
HDL-C (MG/DL)	37.8 (20.9)	33.6 (13.3)
LDL-C (MG/DL)	101.8 (31.2)	103.5 (32.5)
TRIGLYCERIDES (MG/DL)	140.5 (58.6)	213.8 (226.6)[1]
PRO-C3 (NG/ML)	16.0 (5.9)	15.7 (5.0)
ELF	9.9 (0.8)	9.7 (0.7)
FIBROSIS STAGE (F2/F3)	9 / 4	19 / 6

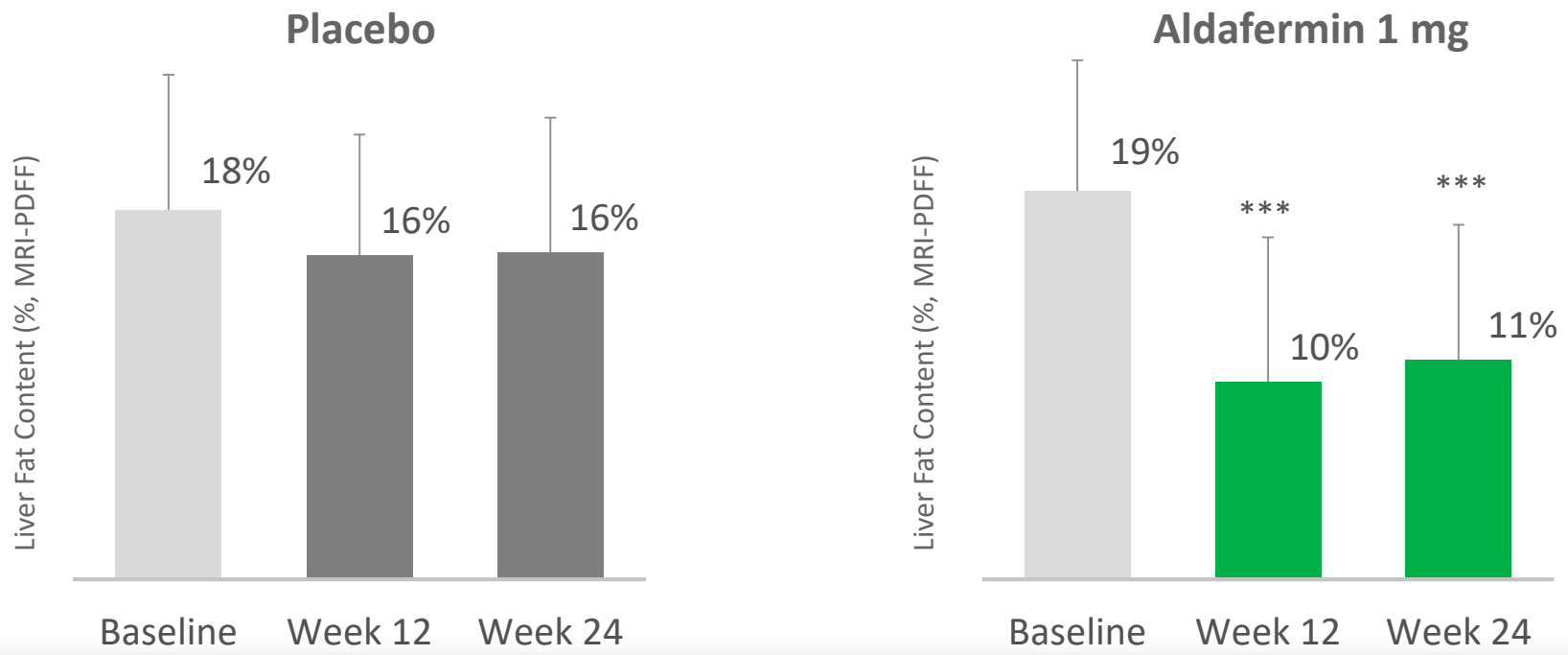
Preliminary results

[1] *Includes one patient with baseline TG level = 1251 mg/dL*

Statistically Significant Reduction in Absolute Liver Fat Content From Baseline *vs.* Placebo at Week 24

STEATOSIS

LIVER FAT CONTENT (%, MRI-PDFF)



72% of patients treated with aldafermin achieved **≥5% absolute reduction** in LFC *vs.* 17% placebo at W24

**** P<0.0001 vs. baseline (LS mean)*

LS Mean Change from BL (SE)	**-1.9 (1.9)**	**-2.0 (2.0)**	**-8.9 (1.3)****	**-7.9 (1.4)***

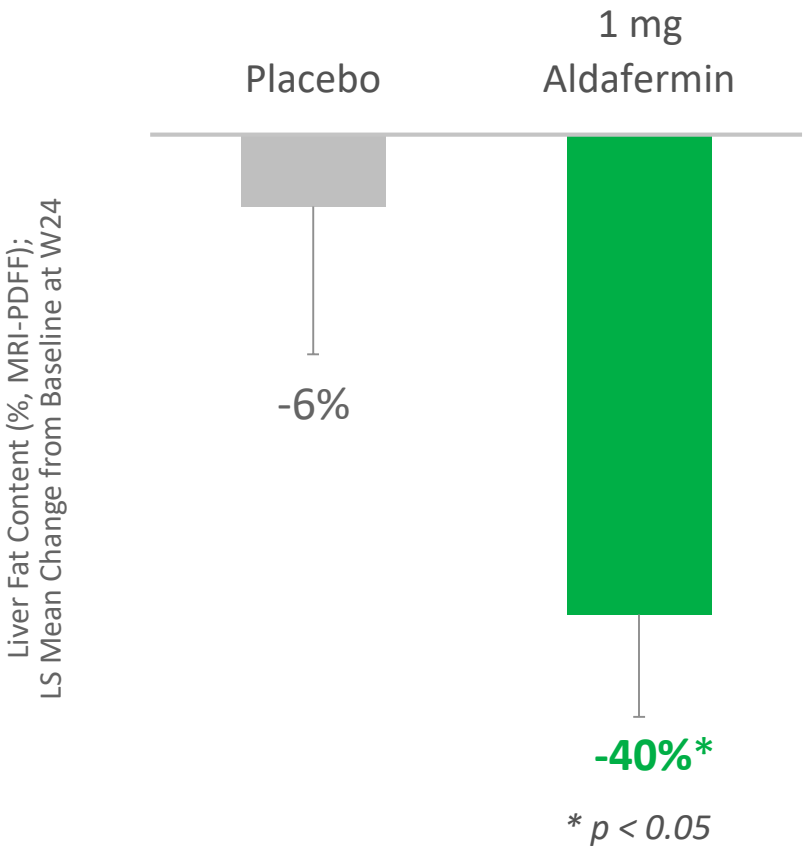
*** P<0.01; * P<0.05 vs. placebo*

Cohort 4 interim analysis; Preliminary data

Statistically Significant Reduction in Relative Liver Fat Content From Baseline *vs*. Placebo at Week 24

STEATOSIS

RELATIVE CHANGE IN LFC



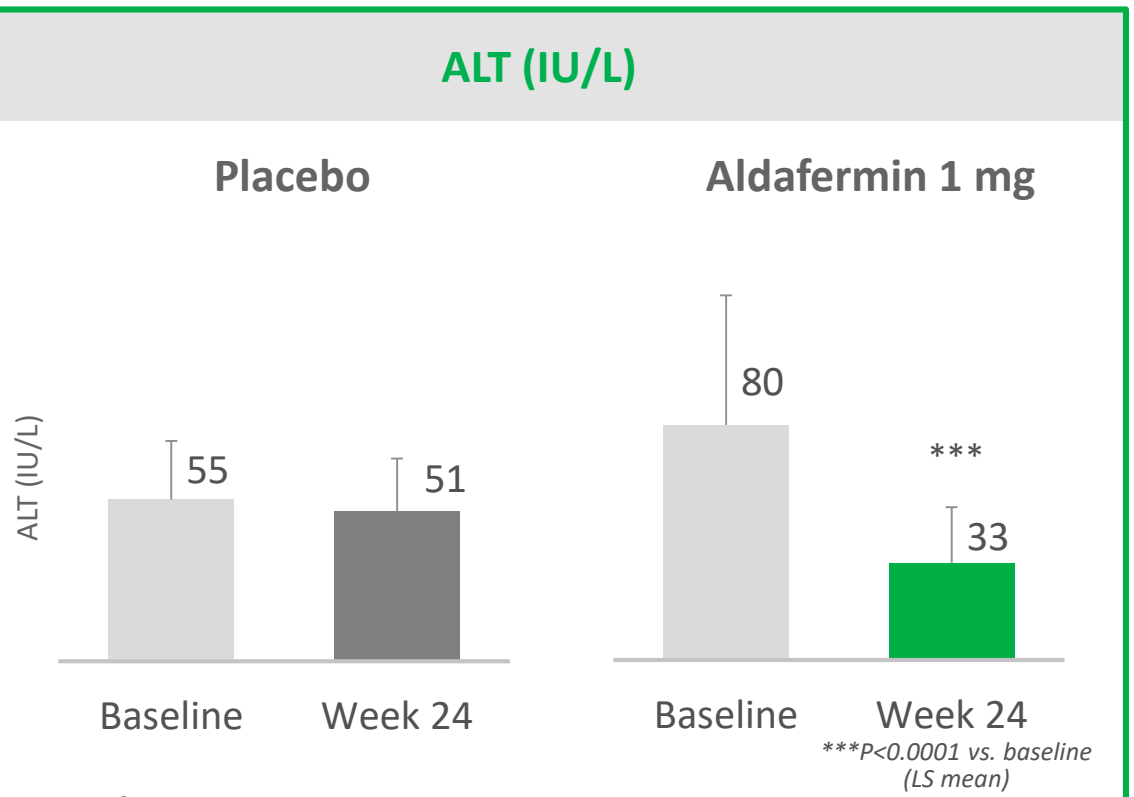
- **Aldafermin normalized LFC in 28%** of patients *vs*. no normalization in placebo arm at W24
- **72%** of patients treated with aldafermin achieved **≥30% relative LFC** *vs*. 17% placebo at W24

Cohort 4 interim analysis; Preliminary data

Clinically Meaningful Relative Reductions in ALT and AST with Aldafermin

INFLAMMATION

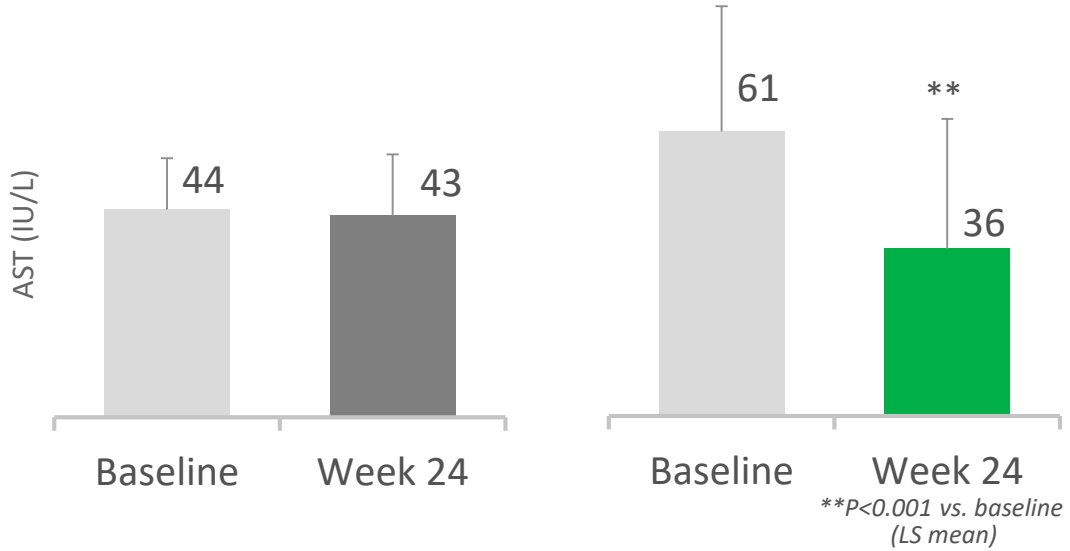
ALT (IU/L)



	Placebo	Aldafermin 1 mg
Relative Change from BL at W24 (LS Mean, SE)	**-2% (10)**	**-39% (8)****

***P<0.01 vs. placebo*

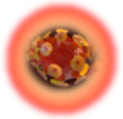
AST (IU/L)



	Placebo	Aldafermin 1 mg
Relative Change from BL at W24 (LS Mean, SE)	**-4% (12)**	**-23% (9)**

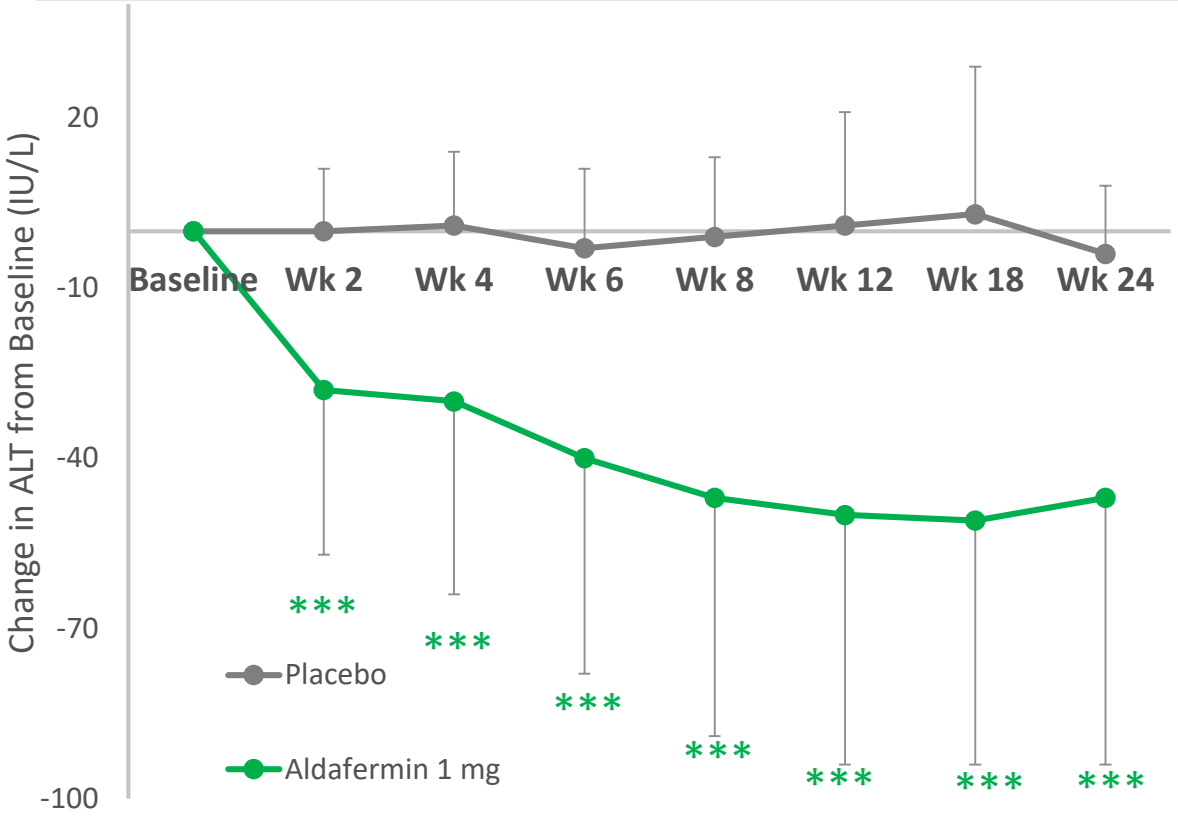
Cohort 4 interim analysis; Preliminary data

Rapid and Sustained Decreases in ALT and AST with Aldafermin

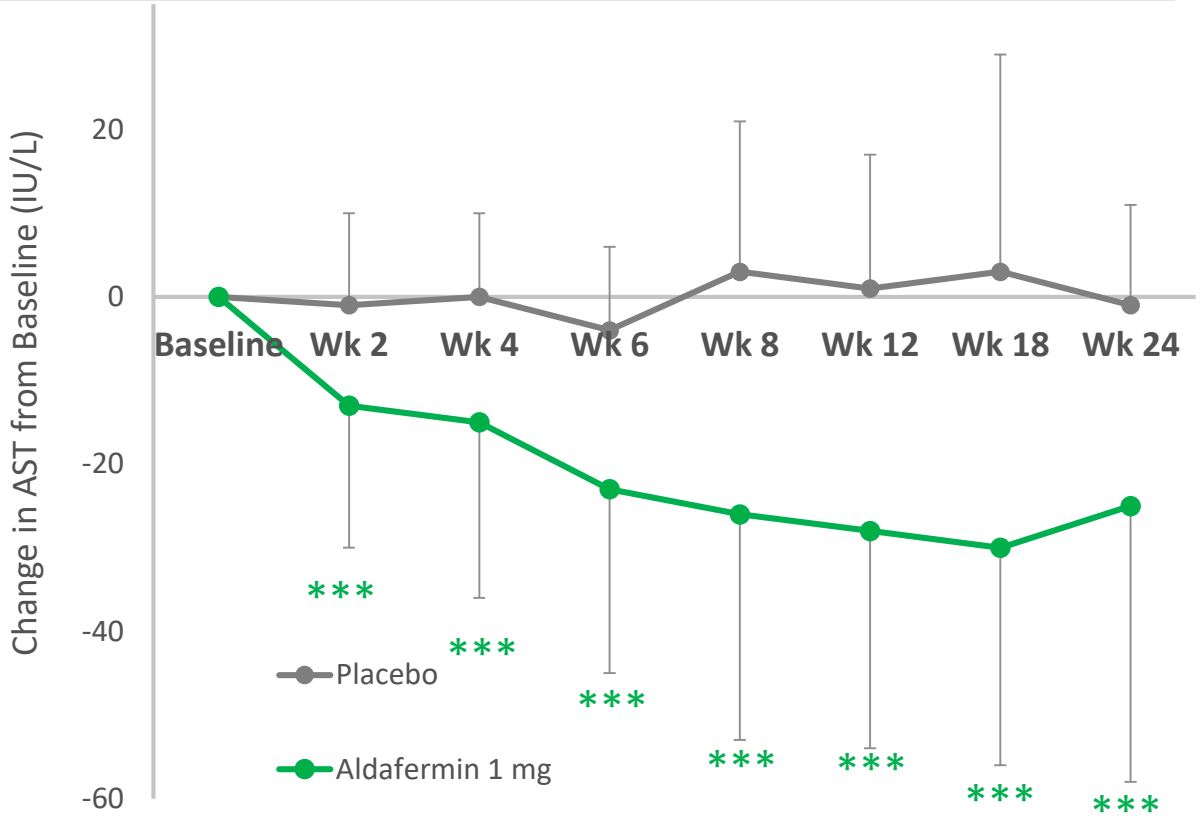


INFLAMMATION

ALT (IU/L)



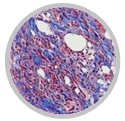
AST (IU/L)



Cohort 4 interim analysis; Preliminary data

****P<0.001 vs. baseline (LS mean)*

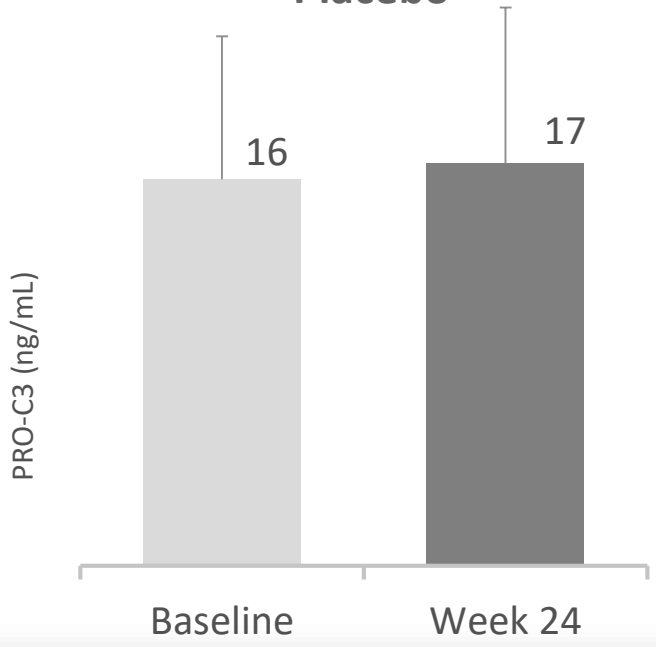
Statistically Significant Relative Reduction in PRO-C3, An Exploratory Biomarker of Active Fibrogenesis



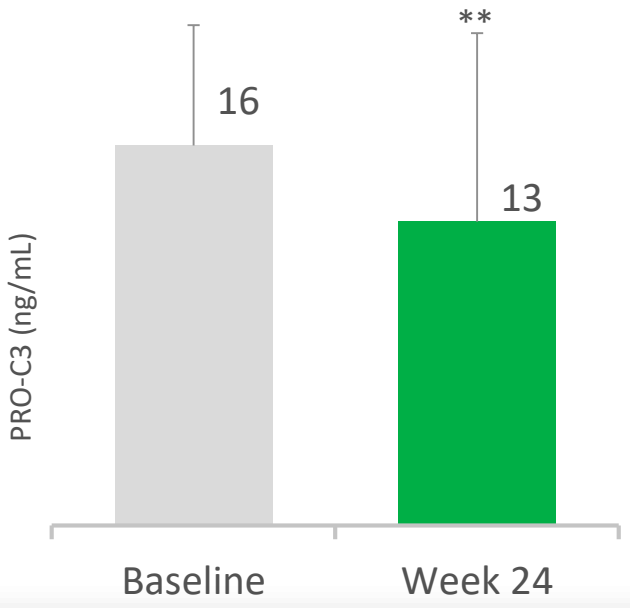
FIBROSIS

PRO-C3 (ng/mL

Placebo



Aldafermin 1 mg



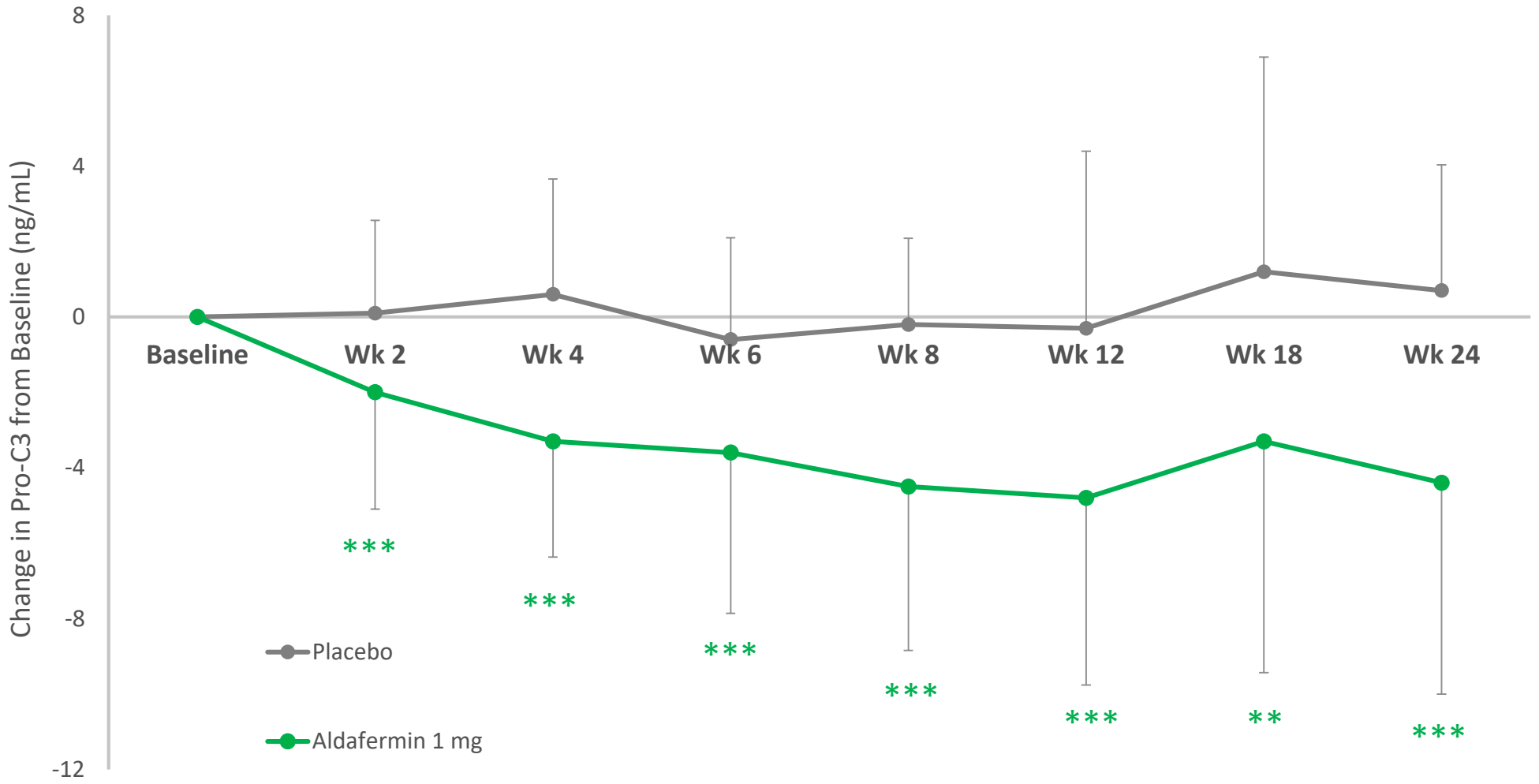
***P<0.001 vs. baseline (LS mean)*

Relative Change from BL at W24 (LS Mean, SE)	**+5% (10)**	**-24% (7)***

**P<0.05 vs. placebo*

Cohort 4 interim analysis; Preliminary data

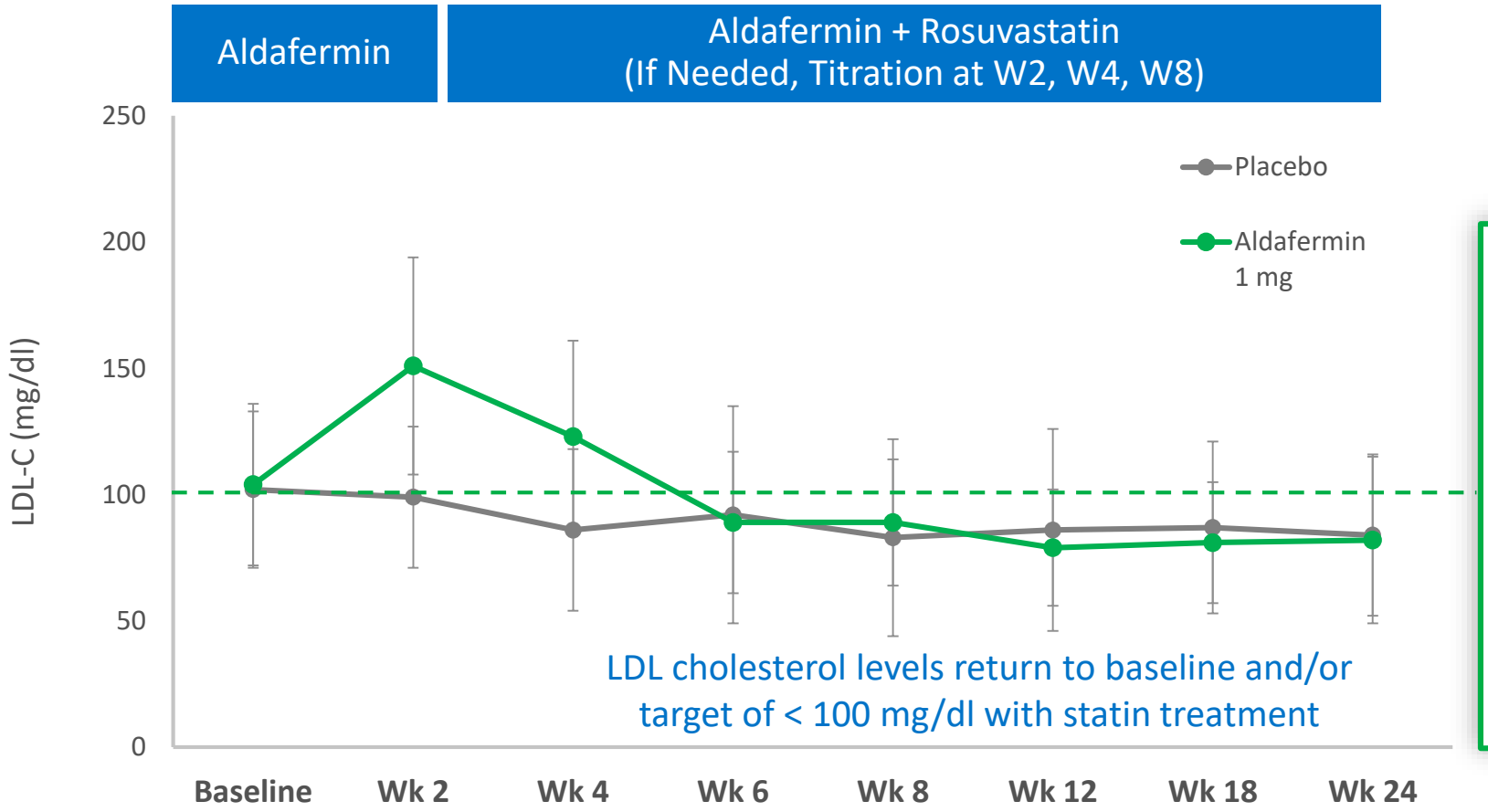
Rapid and Sustained Statistically Significant Reduction in PRO-C3 as Early as Week 2



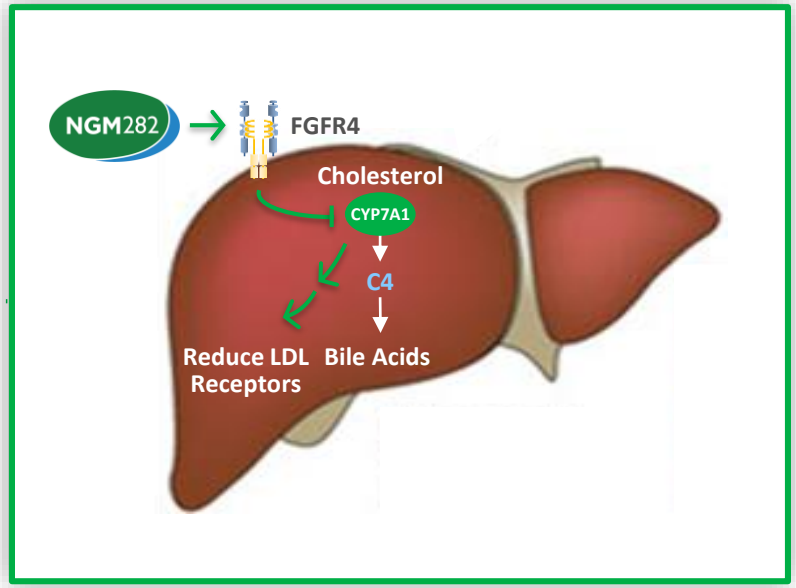
****P<0.001, **P<0.01 vs. baseline (LS mean)*

Cohort 4 interim analysis; Preliminary data

LDL-C Changes Effectively Managed with Statin Therapy



LDL-C elevation is a direct effect of FGF19's potent inhibition of the classical bile acid synthesis pathway



Preliminary results; Interim analysis

Interim Analysis: Adverse Event Summary

TEAE Classification	Placebo (N=13)	Aldafermin 1.0 mg (N=25)
Any TEAE	11 (84.6%)	22 (88.0%)
TEAE Leading to Drug Withdrawal	1 (7.7%)	0 (0%)
Serious TEAE	2 (15.4%)	0 (0%)
Drug-Related TEAE	8 (61.5%)	13 (52.0%)
TEAE Leading to Death	0 (0 %)	0 (0%)

MedDRA Preferred Term	Placebo (N=13)	Aldafermin 1.0 mg (N=25)
Diarrhea	1 (7.7%)	7 (28%)
Headache	5 (38.5%)	3 (12%)
Nausea	4 (30.8%)	3 (12%)
Arthralgia	0 (0%)	3 (12%)
Diabetes Mellitus	2 (15.4%)	2 (8%)
Influenza like Illness	2 (15.4%)	1 (4%)
Loose stools	2 (15.4%)	1 (4%)
Pruritus	2 (15.4%)	1 (4%)
Hypertension	2 (15.4%)	1 (4%)
Frequent bowel movements	0 (0%)	1 (4%)
Increased frequency of defecation	0 (0%)	1 (4%)
Peripheral Edema	2 (15.4%)	0 (0%)
Fatigue	2 (15.4%)	0 (0%)

Cohort 4 interim analysis; Preliminary data

Summary of Cohort 4 Interim Analysis: 24-Week Placebo-Controlled Study of Aldafermin 1 mg

- Statistically significant reduction in absolute and relative LFC *vs*. placebo (primary endpoint)
- Clinically meaningful reductions in ALT, AST
- Statistically significant reduction *vs*. placebo in PRO-C3, exploratory biomarker of fibrogenesis
- Increase in LDL-C mitigated by rosuvastatin and managed to below baseline
- Demonstrated favorable tolerability profile in first 24-week study in NASH patients

As a monotherapy, aldafermin demonstrated potent activity across all key biomarkers of disease, consistent with prior 12-week data

Aldafermin Development Plan

	PHASE 2 – COHORT 4	PHASE 2b (ALPINE 2/3)	PHASE 2b – COMPENSATED CIRRHOTICS (ALPINE 4)	PHASE 3 PROGRAM
Status	**Ongoing** (Topline histology anticipated 1Q20)	**Ongoing**	**To Initiate YE19**	**To Initiate Planning with Phase 2 Cohort 4 Data**
Duration	24 Weeks	24 Weeks	TBD	TBD
Aldafermin Dose (# Patients)	Placebo (~25) 1 mg (~50)	Placebo (~40) 0.3 mg, 1 mg, 3 mg (~40 per dose level)	Placebo Dose Levels TBD	Placebo Single Dose Level TBD

Our Expansive Pipeline

7 Development Programs

PRODUCT CANDIDATE	PRODUCT DESCRIPTION (DOSING FREQUENCY)	POTENTIAL INDICATIONS	STAGE OF DEVELOPMENT	WORLDWIDE COMMERCIAL RIGHTS
Aldafermin	FGF19 Analog (Once Daily)	NASH	Phase 2b	NGM Bio: Wholly-Owned
NGM313 (MK-3655)	FGFR1c/KLB Agonistic Antibody (Once Monthly)	NASH, Type 2 Diabetes	Phase 1b	MERCK: Licensed; NGM Bio
NGM120	GFRAL Antagonistic Antibody (Long Acting)	Cancer Anorexia/Cachexia Syndrome (CACS)	Phase 1	NGM Bio; MERCK: Option
NGM217	Undisclosed (Long Acting)	Diabetes	Phase 1	NGM Bio; MERCK: Option
NGM621	Complement C3 Inhibitory Antibody (Long Acting)	Dry Age-Related Macular Degeneration (AMD)	Phase 1	NGM Bio; MERCK: Option
NGM386	GDF15 Analog (Once Daily)	Metabolic	Phase 1	NGM Bio: Wholly-Owned
NGM395	GDF15 Analog (Long Acting)	Metabolic	Preclinical	NGM Bio: Wholly-Owned

FGF19: fibroblast growth factor 19; FGFR1c/KLB: fibroblast growth factor receptor 1c/beta-klotho; GDF15: growth differentiation factor 15; GFRAL: glial-cell-derived neurotrophic factor receptor alpha-like

NGM Biopharmaceuticals, Inc. Corporate Overview

Novel Biology. Powerful Medicines. Transformative Impact.

NGMBio

Next Generation Medicines