

# ALG-000184 Has Favorable Antiviral Effect & Safety in Untreated Asian/Non-Asian HBeAg-Negative CHB Subjects

Edward J Gane<sup>1</sup>, <u>Man-Fung Yuen<sup>2</sup></u>, Jinlin Hou<sup>3</sup>, Yanhua Ding<sup>4</sup>, Alina Jucov<sup>5</sup>, XieEr Liang<sup>3</sup>, Jia Xu<sup>4</sup>, Min Wu<sup>6</sup>, Kha Le<sup>6</sup>, Maida Maderazo<sup>6</sup>, Lawrence M. Blatt<sup>6</sup>, Sushmita Chanda<sup>6</sup>, Tse-I Lin<sup>6</sup>, Matthew McClure<sup>6</sup> and Kosh Agarwal<sup>7</sup>

 Faculty of Medicine, University of Auckland; 2. Department of Medicine, School of Clinical Medicine, The University of Hong Kong; 3. Nanfang Hospital, Southern Medical University; 4. The First Hospital of Jilin University; 5. ARENSIA Exploratory Medicine Gmbh; 6. Aligos Therapeutics, Inc.;
King's College Hospital, Institute of Liver Studies

#### Disclosure



- Member of Scientific Advisory Board for AbbVie, Abbott Diagnotics, Aligos Therapeutics, AiCuris, Antios Therapeutics, Arbutus Biopharma, Arrowhead Pharmaceuticals, Assembly Biosciences, Clear B Therapeutics, Dicerna Pharmaceuticals, Finch Therapeutics, Fujirebio Incorporation, GlaxoSmithKline, Gilead Sciences, Immunocore, Janssen, Precision BioSciences, Roche, Sysmex Corporation, Tune Therapeutics, Vir Biotechnology and Visirna Therapeutics.
- Speaker for Fujirebio Incorporation, Gilead Sciences, Roche, Sysmex Corporation
- Grant/research support from AbbVie, Assembly Biosciences, Arrowhead Pharmaceuticals, Fujirebio Incorporation, Gilead Sciences, Immunocore, Sysmex Corporation and Roche
- Data Safety Monitoring Board for Aligos Therapeutics, Suzhou Ribo Life Science Co.Grant/research support from AbbVie, Assembly Biosciences, Arrowhead Pharmaceuticals, Fujirebio Incorporation, Gilead Sciences, Immunocore, Sysmex Corporation and Roche

## Background



- ALG-000184 is a capsid assembly modulator-empty (CAM-E), which inhibits HBV via
  - Primary mechanism: promotes premature assembly of core protein, resulting in empty capsids and reductions of HBV DNA/RNA
  - Secondary mechanism: prevents the establishment/replenishment of cccDNA, resulting in reductions of HBcrAg, HBeAg, and HBsAg
- Study ALG-000184-201 (NCT04536337) is an ongoing multi-part Phase 1 study evaluating oral dosing with ≤300 mg ALG-000184 in healthy volunteers and CHB subjects
  - Single/multiple ALG-000184 doses in healthy volunteers (Parts 1 & 2) were well tolerated with a favorable PK profile
    - > No ethnic differences in PK or safety between Asian and non-Asian healthy volunteers were observed<sup>1</sup>
  - Dosing with ≤300 mg ALG-000184 x 28 days in HBeAg+ and HBeAg- CHB subjects was well tolerated, with favorable PK, and potent antiviral activity demonstrated<sup>2</sup>
    - Effect of ethnicity on ALG-000184 PK, safety, and antiviral activity in CHB subjects has not been previously evaluated

## ALG-000184 Part 3 Study Design



- Randomized, double blind, placebo controlled
- Each cohort (N=10/cohort) was randomly assigned (4 active: 1 placebo) to dose x 28 days
- Population: untreated HBeAg+ and HBeAg- CHB subjects
- Dose levels evaluated by population

ALG-000184 Dose Level (mg)	HBeAg Status				
10	HBeAg-				
50					
100					
10					
100	HBeAg+				
300					

## ALG-000184 Part 3 Key Study Entry Criteria



## Adult subjects with CHB or chronic HBV infection

- Treatment naïve or currently not treated
- HBeAg positive or negative
- − ALT and AST  $\leq$ 5 × ULN
- HBV DNA >2000 IU/mL
- Metavir scrore < F3 or liver stiffness measurment < 8.5 kPa</li>

#### **Baseline Characteristics of ALG-000184 Treated Subjects**



	HBeAg Negative						HBeAg Positive
Dose level	ALG-000184 Dose						ALG-000184 Dose
	10mg N=7		50mg N=8		100mg N=8		10-300mg
							N=25
	Asian	non-Asian	Asian	non-Asian	Asian	Non-Asian	Asian
n	n=3	n=4	n=5	n=3	n=1	n=7	n=25
Age, years, mean (SEM)	46.3 (1.3)	42.2(3.0)	48(3.3)	34(3.1)	56	42.4(3.1)	32.8(1.2)
Male, N(%)	1(33)	1 (25)	3(60)	1(33)	0	3(43)	14/25(56)
BMI, kg/M2, mean (SEM)	24.5(6.7)	27.0 (0.3)	23.3 (2.1)	27.9(7.5)	23.3	27.7(2.2)	22.1(0.6)
HBV genotype: A/B/C/D/E (%)	A:1(33) B: 2(67)	D: 4(100)	B: 4(80) C:1(20)	A:1(33) D:2(67)	B:1(100)	A:1(14) D:6(86)	B:13(52) C:12(48)
HBV DNA, log10 IU/mL mean (SEM)	4.0(0.2)	4.2(0.2)	4.8(0.6)	4.7(0.5)	4.1	4.2(0.5)	8.4(0.1)
HBV RNA, log <sub>10</sub> copies/mL mean (SEM)	1.3(0.8)	1.2(0.4)	2.1(0.6)	2.1(0.5)	1.8	1.6(0.5)	7.8(0.2)

Sufficient Asian/non-Asian data available for analysis only in HBeAg- subjects dosed with 10, 50 mg ALG-000184

#### ALG-001075 Plasma Pharmacokinetics ( Asian vs Non-Asian in HBeAg (-)





After adjusting for dose and bodyweight, there was a ~2-fold increase in  $C_{max}$  and AUC observed for Asian vs. non-Asian subjects on Days 1 and 28

## HBV DNA Changes Over Time Asian vs Non-Asian in HBeAg(-)





Similar HBV DNA reductions seen in 50 mg vs. 10 mg cohorts No meaningful DNA differences seen in either cohort between Asian and non-Asian subjects Similar number of Asians (5/8) and non-Asians (3/7) had HBV DNA < LLOQ (10 IU/mL) at Day 28

## HBV RNA Changes Over Time Asian vs Non-Asian in HBeAg(-)





Greater HBV RNA reductions seen in 50 mg due to high baseline level No RNA differences seen in either cohort between Asian and non-Asians subjects All Asians (7/7) and non-Asians (5/5) with available data at Day 28 had HBV RNA < LLOQ (10 IU/mL)

#### Safety Asian vs non-Asian in HBeAg(-)



Dose		10 mg	50 mg			
Ν		7	8			
Subject, N(%)	Asian n=3	Non-Asian n=4	Asian n=5	Non-Asian n=3		
Any TEAE	1	0	3 (60)	3 (100)		
SAE	0	0	0	0		
TEAE leading to study drug discontinuation	0	0	0	0		
Grading TEAE Grade 1 TEAE Grade 2 TEAE Grade ≥3	1(33) 0 0	0 0 0	3 (60) 0 0	2 (67) 3 (100) 0		

ALG-000184 was well tolerated in HBeAg-negative subjects dosed daily with 10-50 mg ALG-000184 x 28 days Similar safety profile between Asian and non-Asian subjects

## Conclusion



- Dosing with 10 or 50 mg ALG-000184 x 28 days was associated with small ~2x fold differences in drug concentrations between Asian and non-Asian HBeAg- subjects
- Asian and non-Asian HBeAg- CHB subjects dosed with 10 and 50 mg ALG-000184 had a similar safety profile and had similar reductions in HBV DNA and RNA
- Long term dosing (≤96 weeks) of HBeAg- and HBeAg+ CHB subjects with ≤300 mg ALG-000184 is ongoing

Additional data in this study ALG-000184-201 are presented in:

- Oral 101807 for Part 4 Cohort 2 and B: 300mg ALG-000184 ± ETV in HBeAg-positive CHB subjects for up to 72 weeks
- Oral 101816 for Part 4 Cohort 1: 100mg ALG-000184 + ETV in HBeAg-positive CHB subjects for up to 24 weeks