Fourth Quarter 2018 Results Call
Corporate Update & Financial Results

March 4, 2019

Forward-Looking Statements

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Agenda

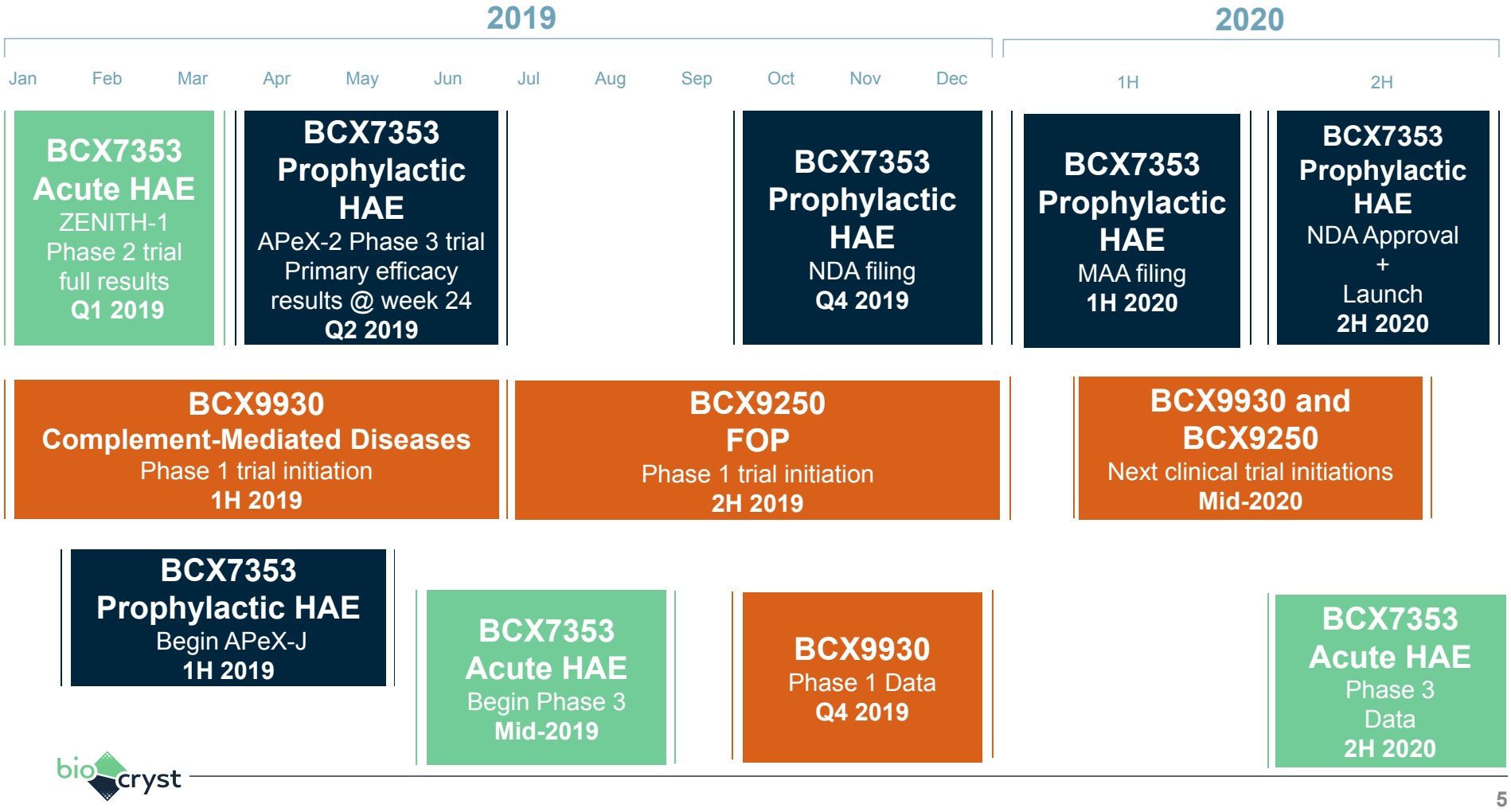
- Update on Strategy and Pipeline: Strong start to 2019, upcoming milestones on-track
  Jon Stonehouse – President, Chief Executive Officer
- Clinical Update:
  - ZENITH-1: Full topline data confirms 750 mg dose for Phase 3
  - APeX-2: 24-week data readout on track for Q2 2019
  - APeX-J: First patients enrolled
  - BCX9930 advances to clinical development for complement-mediated diseases
    Dr. Bill Sheridan – Chief Medical Officer
- Commercial Update:
  - Significant market opportunity for BCX9930
  - Latest market research confirms strong patient and physician demand for oral HAE therapy
    Lynne Powell – Chief Commercial Officer
- Financial Update: New $100 million facility adds significant financial flexibility
  Thomas Staab – Chief Financial Officer
- Summary and Q&A

Update on Strategy and Pipeline:

Strong start to 2019

Upcoming milestones on-track

Many Anticipated Milestones in 2019 - 2020



Clinical Update:

ZENITH-1: 750 mg advancing to Phase 3

APeX-2: 24-week data on-track for Q2

APeX-J: First patients enrolled

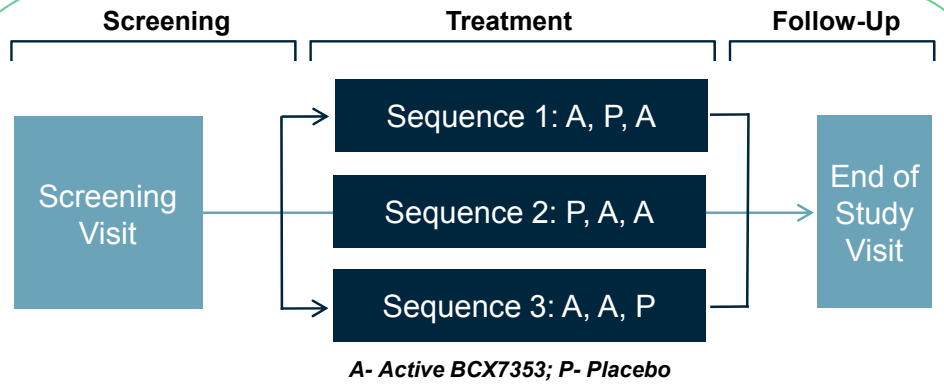
BCX9930: Oral Factor D inhibitor advancing to Phase 1 for complement-mediated diseases

ZENITH-1 is Unique – Designed to Conform with Current Treatment Paradigm of On-demand Rx

Drug ***Study***	**Cinryze** ***CHANGE***	**Berinert** ***IMPACT-1***	**Kalbitor** ***EDEMA-3***	**Firazyr** ***FAST-3***	**Ruconest** ***C-1310 Trial***	**BCX7353** ***ZENITH-1***
Years subjects enrolled	2005-2007	2005-2007	2005-2007	2009-2010	2011-2012	2017-2019
Route	**IV infusion**	**IV infusion**	**SC injection**	**SC injection**	**IV infusion**	**PO (liquid)**
Duration of symptoms prior to Rx	**≤ 4 hours**	**≤ 5 hours**	**≤ 8 hours**	**6 to 12 hours**	**≤ 4 hours**	**≤ 1 hour**
Location of treatment	**Clinic**	**Clinic**	**Clinic**	**Clinic**	**Clinic**	**Home**
Duration of observation by HCP	≥ 4 hours	≥ 4 hours	≥ 4 hours	≥ 8 hours	6 hours	none
Treatment administration	**HCP**	**HCP**	**HCP**	**HCP**	**HCP**	**Patient**
Availability of self-administered rescue Rx	None	None	None	None	None	icatibant pdC1INH rhC1INH
Availability of HCP-administered rescue Rx	Second dose of blinded study drug	Second dose of blinded study drug	Opiates, antiemetics	icatibant pdC1NH	rhC1INH icatibant pdC1NH ecallantide	icatibant pdC1INH rhC1INH

Design of ZENITH-1 Phase 2: At-home Self-Administered Oral Treatment

Trial methods are aligned with the current guidelines for on-demand treatment[1,2]



A- Active BCX7353; P- Placebo

Trial part	Dose level	N of subjects
Part 1	750 mg	36
Part 2	500 mg	12
Part 3	250 mg	12
Total		*60*

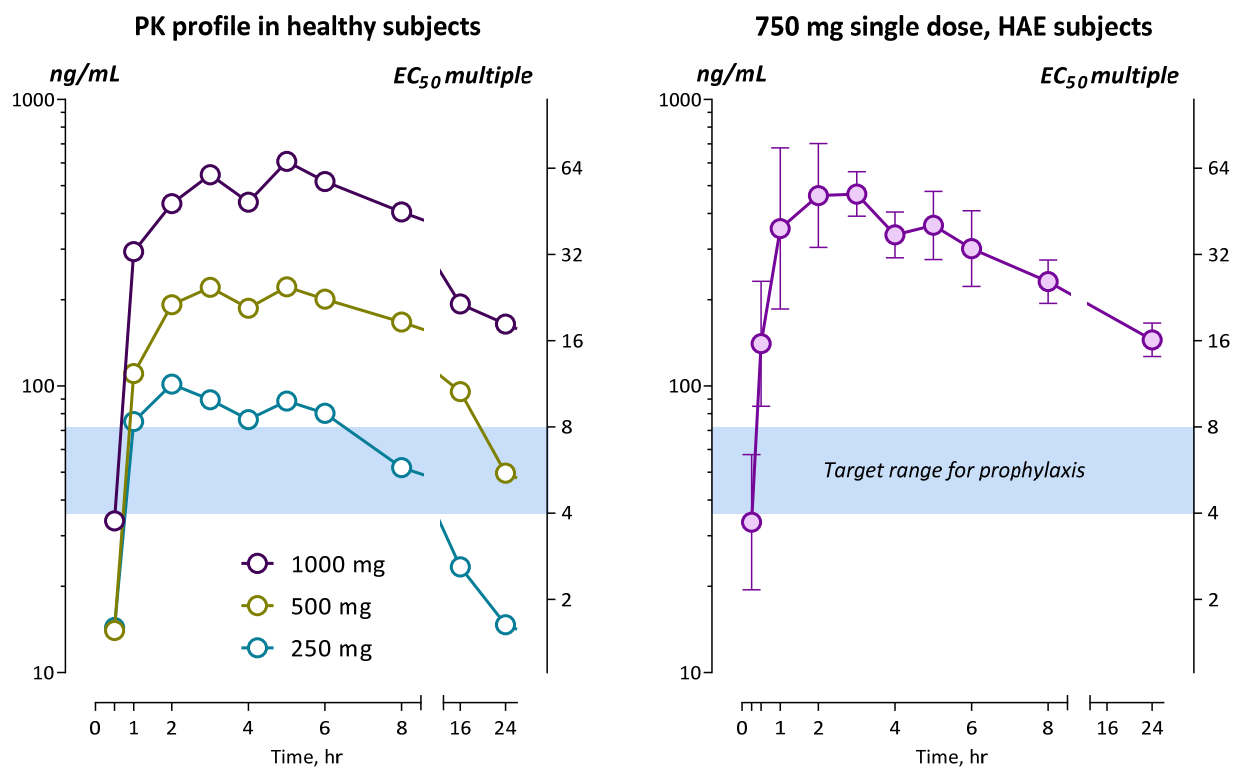
ZENITH-1 protocol instructions

- Subjects were to call the site PI and treat attacks within 1 hour of symptom onset
- Study drug treatment was approved by telephone by the site PI
- Subjects waited 4 hours if possible before using HAE medicines, if they felt additional treatment was needed

"Whenever possible and allowed by drug-specific summary product characteristics, patients should have the on-demand medicine to treat acute attacks at home and should be trained to self-administer these medicines."[2]

[1]Zuraw, B. L. et al 2013 J Allergy Clin Immunol Pract **1**(5): 458-467
[2]Cicardi, M. et al 2012). Allergy **67**(2): 147-157.

PK Profiles of Single Oral Doses of BCX7353 Supported its Evaluation as an Acute HAE Treatment



Mathis A, et al *AAAAI*; *2018/11/01/*. 2018: S32.

Data shown are means for healthy subjects and mean (SD) for HAE subjects

After a single oral dose of 750 mg BCX7353 in HAE subjects:

- Mean drug levels were approximately 16 x EC_{50} within 30 min, and remained at or above this level through at least 24 hours post-dose
- Drug concentrations exceeded 8 x EC_{50} in all subjects from 30 min to at least 24 hours post-dose

Mathis A, et al *AAAAI*; *2018/11/01/*. 2018: S32.

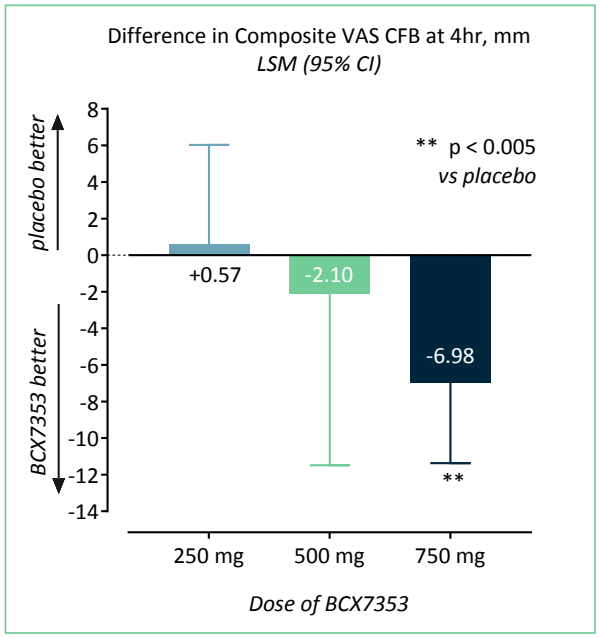
ZENITH-1 Highlights: Advancing 750mg to Phase 3

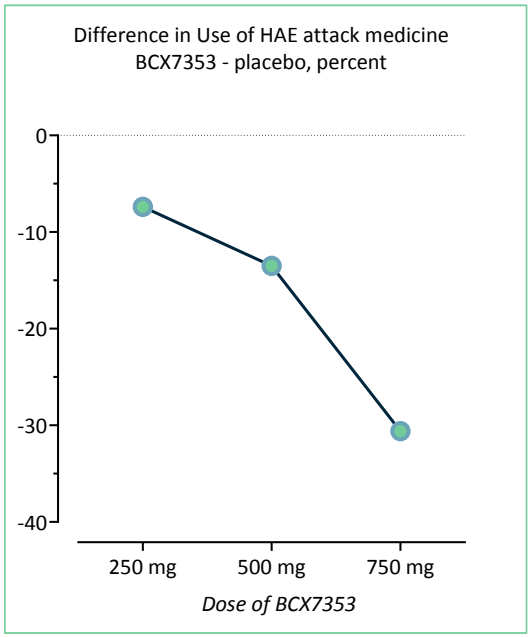
- First-ever demonstration of activity and safety, in any clinical trial, of an oral treatment of angioedema attacks in HAE patients
- Only prospective HAE placebo-controlled trial conducted of at-home, on-demand treatment
- Statistically significant and clinically meaningful improvements in outcomes comparing BCX7353 750 mg to placebo observed across multiple endpoints
- Differences to placebo observed at first timepoint measured, 1 hr post-dosing
- Persistent differences to placebo observed through 24 hours post-dosing
- Robust dose response observed across 250 mg→ 750 mg in multiple endpoints
- Excellent safety/tolerability profile

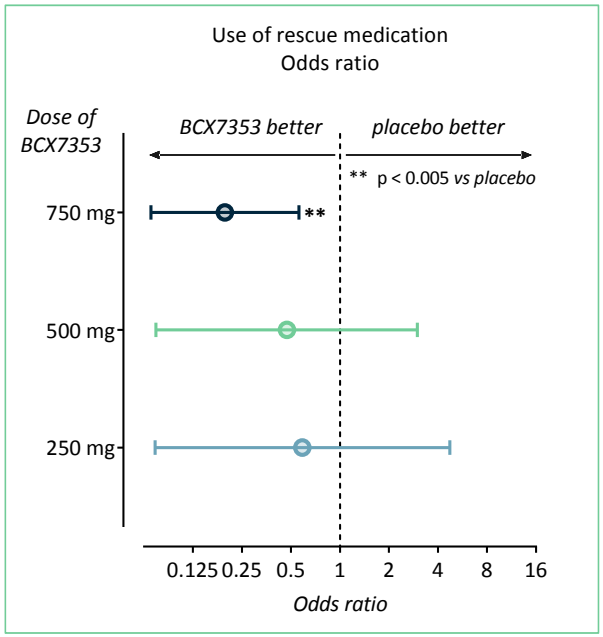
ZENITH-1 – Analysis Populations

Population	Part 1: 750 mg vs placebo	Part 2: 500 mg vs placebo	Part 3: 250 mg vs placebo
All subjects randomized	36	15	12
No attacks treated on study	3	1	1
Safety population (received ≥ 1 dose of study drug)	33	14	11
Full analysis population (subjects who have completed a post treatment VAS assessment with at least one treated attack)	33	14	11
Number who treated 1/2/3 attacks	1 / 2 / 30	3 / 0 /11	0 / 1 / 10
Discontinued due to TEAE	2	1	0
Not discontinued for TEAE but did not complete 3 attacks on study	1	2	1

Robust Dose Response in ZENITH-1







Longhurst, H. et al AAAAI 2019 San Francisco Poster #110

VAS=Visual Analog Scale CFB=Change from Baseline LSM=Least Square Mean

ZENITH-1 – Safety Summary

	BCX7353			All Placebo
	750 mg	500 mg	250 mg	
Number of subjects treated with at least 1 dose of study drug	33	14	11	53
Number of attacks treated*	64	25	21	53
Number of attacks with a reported treatment-emergent adverse events (TEAE)	16 (25.0%)	10 (40.0%)	10 (47.6%)	17 (32.0%)
Number of attacks with a serious TEAE ¥	0	1 (4.0%)	0	1 (1.9%)
Number of attacks with a drug-related TEAEs as assessed by investigator	7 (10.9%)	5 (20.0%)	6 (28.6%)	6 (11.3%)
Number of attacks with TEAEs leading to permanent discontinuation from study drug	1 (1.6%) ‡	1 (4.0%)€	0	1 (1.9%) §
Number of attacks with TEAEs of Grade 3 or Grade 4	0	1 (4.0%)Δ	0	0
Number of attacks with TE lab abnormalities of Grade 3 or 4	0	0	0	0
Number of attacks with drug-related TEAEs of Grade 3 or 4	0	0	0	0
Most common adverse events				
Diarrhea	3 (4.7%)	3 (12.0%)	0	2(3.8%)
Abdominal pain	2 (3.1%)	3 (12.0%)	1 (4.8%)	1 (1.9%)
Nausea	2 (3.1%)	2 (8.0%)	2 (9.5%)	0
Nasopharyngitis	4 (6.3%)	0	0	1 (1.9%)
Headache	3 (4.7%)	0	3 (14.3%)	1 (1.9%)

* To account for observation bias, the reported rates take into account the proportion of time considered treatment emergent for BCX7353 and the proportion of time considered treatment emergent for placebo, by using the denominator of number of attacks treated.

Δ Grade 3 serious TEAE of Ankle fracture

‡ Discontinuation on BCX7353 occurred in a subject who developed a small red macule on the forearm 11 hours after taking BCX7353 for an HAE attack occurring in the same anatomic location. The macule lasted for 4 hours and resolved without treatment.

§ Discontinuation on placebo occurred in a subject who experienced abdominal pain on both active and placebo drug. The decision to stop study drug occurred after the placebo dose.

¥ The serious TEAEs of Motorvehicle accident and Ankle fracture were not drug-related.

€ Discontinuation on BCX7353 occurred in a subject who experienced moderate vomiting and nausea.

BioCryst Oral Factor D Inhibitor (BCX9930)

Complement-Mediated Diseases Have High Unmet Need and the List is Growing

CJASN

Clin J Am Soc Nephrol. 2012 Feb;7(2):265-74. doi: 10.2215/CJN.07900811. Epub 2012 Jan 5.

Causes of alternative pathway dysregulation in dense deposit disease.

Zhang Y[1], Meyer NC, Wang K, Nishimura C, Frees K, Jones M, Katz LM, Sethi S, Smith RJ.

Assessing complement blockade in patients with paroxysmal nocturnal hemoglobinuria receiving eculizumab

Régis Peffault de Latour,[1,2] Véronique Fremeaux-Bacchi,[3,4] Raphaël Porcher,[5,6] Aliénor Xhaard,[1] Jérémie Rosain,[3,4] Diana Cadena Castaneda,[3] Paula Vieira-Martins,[3,4] Stéphane Roncelin,[3] Paula Rodriguez-Otero,[1] Aurélie Plessier,[7] Flore Sicre de Fontbrune,[1] Sarah Abbes,[1] Marie Robin,[1] and Gérard Socié[1,8,9]

BLOOD, 29 JANUARY 2015 • VOLUME 125, NUMBER 5 775

Brief Reviews

THE JOURNAL OF IMMUNOLOGY

Complement in Immune and Inflammatory Disorders: Pathophysiological Mechanisms

Daniel Ricklin and John D. Lambris

J Immunol 2013; 190:3831-3838; ;
doi: 10.4049/jimmunol.1203487
http://www.jimmunol.org/content/190/8/3831

C3 glomerulopathy — understanding a rare complement-driven renal disease

Richard J. H. Smith[1], Gerald B. Appel[2], Anna M. Blom[3], H. Terence Cook[4], Vivette D D'Agati[5], Fadi Fakhouri[6], Véronique Fremeaux-Bacchi[7], Mihály Józsi[8], David Kavanagh[9], John D. Lambris[10], Marina Noris[11], Matthew C. Pickering[12], Giuseppe Remuzzi[11,13,14], Santiago Rodriguez de Córdoba[15], Sanjeev Sethi[16], Johan Van der Vlag[17], Peter F. Zipfel[18,19] and Carla M. Nester[1]*

NATURE REVIEWS | NEPHROLOGY VOLUME 15 | MARCH 2019 | 129

AJKD Official Journal of the National Kidney Foundation

The Complement Cascade in Kidney Disease: From Sideline to Center Stage

Jennifer A. McCaughan, MBChB[1,2,*], Declan M. O'Rourke, MBChB, BAO[3], Aisling E. Courtney, MBChB, BAO, MPhil[2]

September 2013 Volume 62, Issue 3, Pages 604–614

Reviews in the Neurosciences

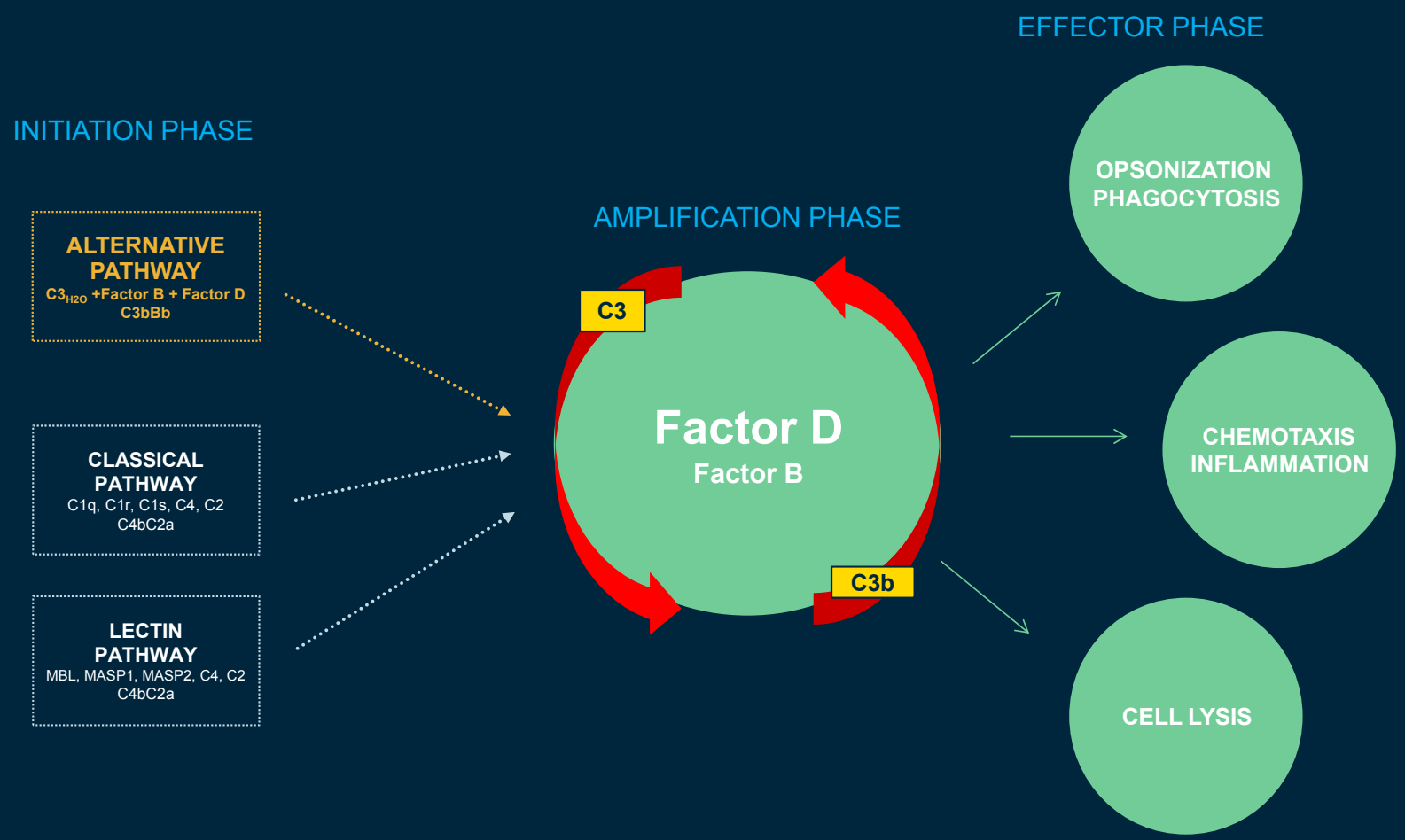
Editor-in-Chief: Huston, Joseph P.

Targeting complement system to treat myasthenia gravis

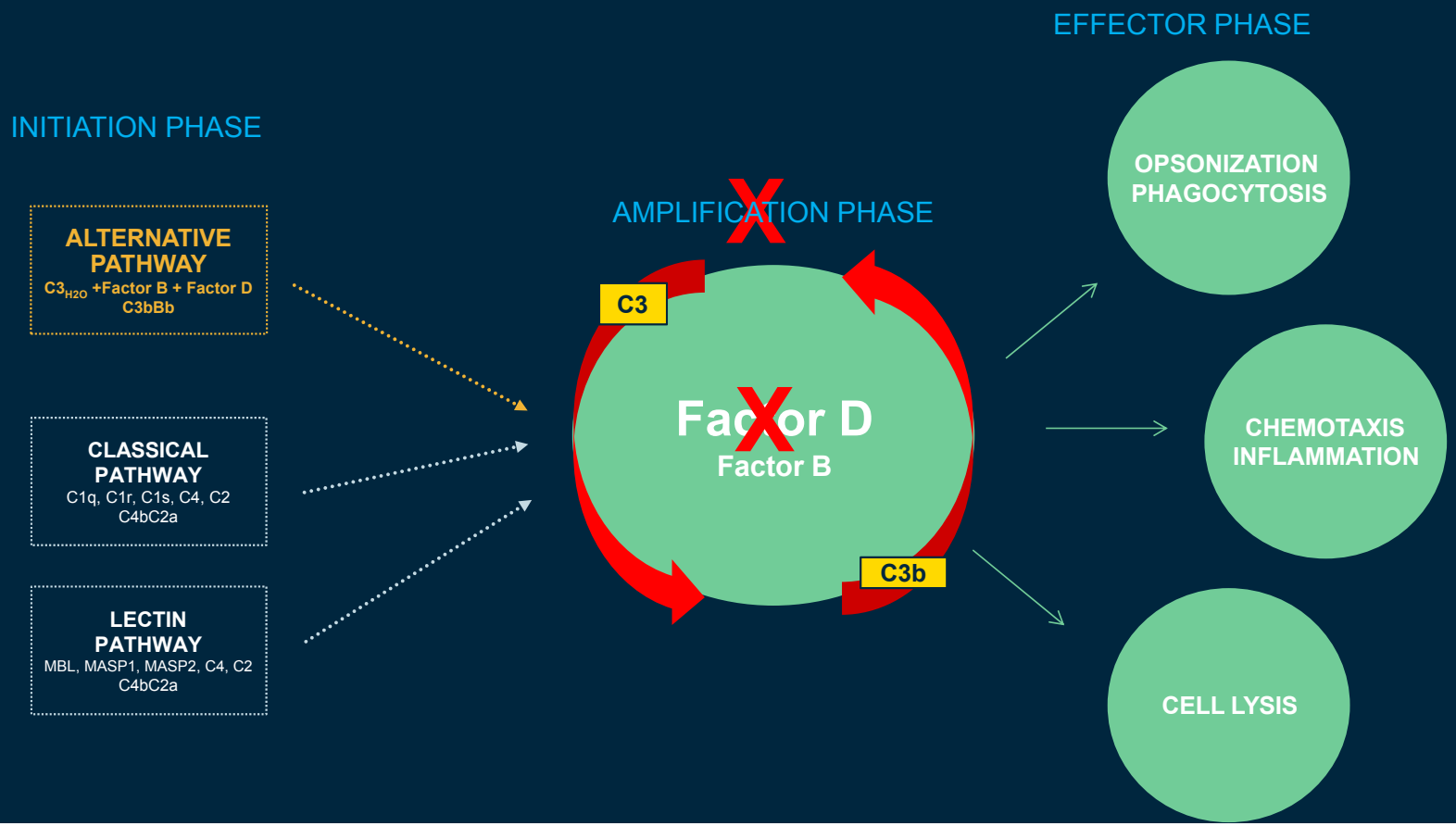
Ruksana Huda / Erdem Tüzün / Premkumar Christadoss

Published Online: 2014-04-12 | DOI: https://doi.org/10.1515/revneuro-2014-0021

Factor D plays Key Role in Amplifying Complement Activation



Targeting Factor D, the Rate Limiting Enzyme in the Alternative Pathway, Prevents Formation of Functional C3 Convertase Leading to Inhibition of Alternative Pathway Activity



BCX9930 a Potent and Selective Inhibitor of Factor D

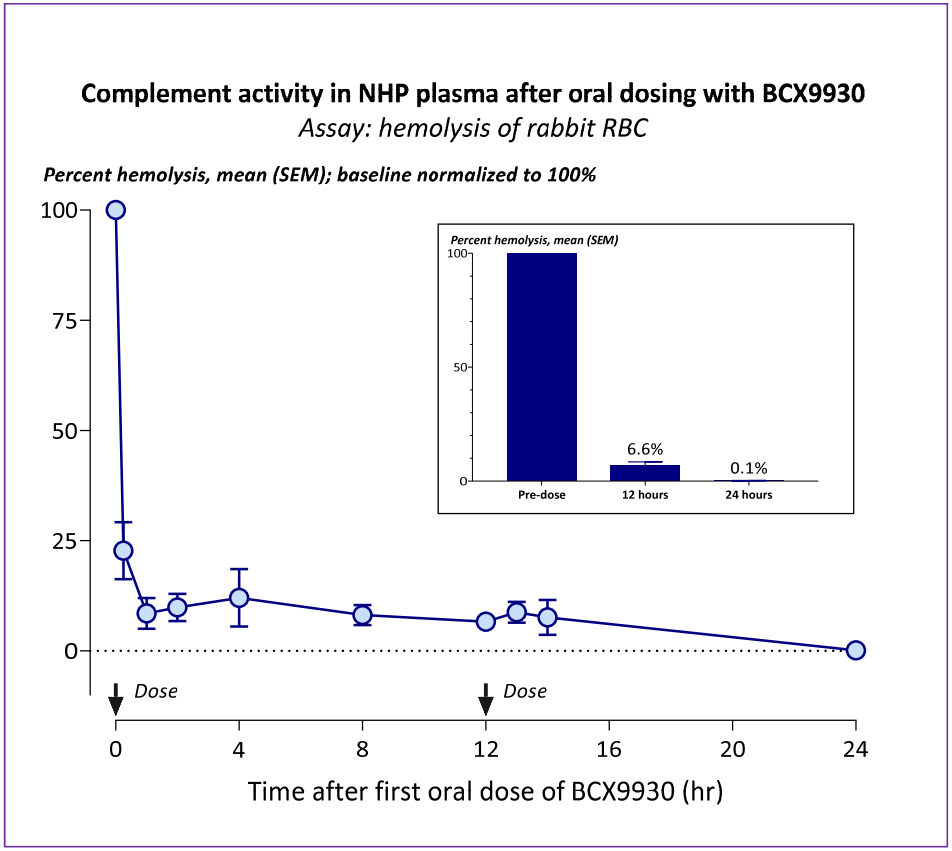
Potency Assays

Assay	Mean IC_{50} or EC_{50}, nM
Factor D esterolytic activity	≈ 15
Cleavage of complement enzyme C3bB by Factor D	≈ 30
Hemolysis of rabbit RBC by human serum	≈ 30
Acid-induced complement-mediated hemolysis of PNH patient RBC	≈ 30
Complement enzyme C3 deposition on PNH patient RBC incubated with acidified C5-deficient serum	≈ 40

Specificity Assays

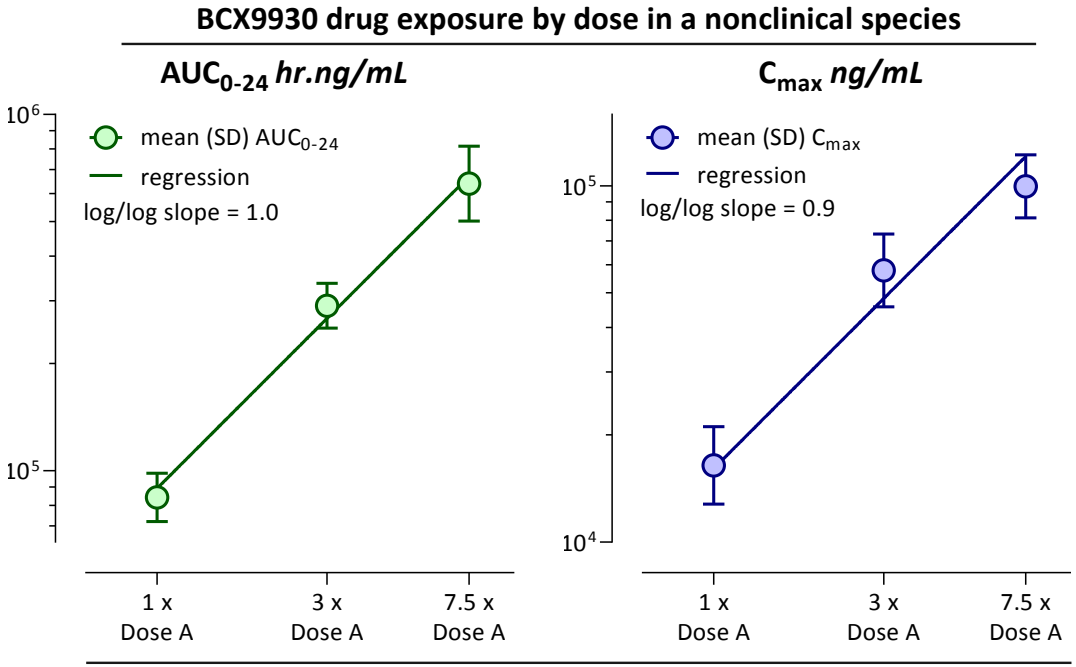
Serine Proteases	Selectivity Ratio relative to Factor D
Complement enzyme C1s	>60
Plasmin	≈ 200
Thrombin	>2000
Activated protein C	>2000
Tissue plasminogen activator	>2000
Trypsin	>2000
Factor Xa	>3000
Factor XIIa	>3000

BCX9930 Inhibits Complement-Mediated Hemolysis in Standard Ex-Vivo Assay After Oral Dosing in NHP



- Hemolysis of rabbit RBC by serum is a very well-established assay, originally developed to detect complement deficiency
- After oral dosing of NHPs with BCX9930, >99.9% suppression of complement-mediated hemolysis was observed
- Drug exposure (AUC_{0-24}) in this experiment was a fraction of the NOAEL
- BCX9930 is approx. 50% *less* potent on NHP compared with human Factor D

Wide Preclinical Safety Margin Provides Significant Dosing Flexibility for Clinical Trials



- High drug levels after oral dosing in 2 nonclinical species
- Linear and dose-proportional exposure in nonclinical species
- Very high NOAELs: human equivalent dose = approx. >5,000 mg
- Large safety margins for entry into the clinic:
  - C_{max} at NOAELs more than 500 times the estimated therapeutic target level

Commercial Update:

Significant opportunity for oral Factor D Inhibitor

Latest market research confirms demand for oral HAE therapy

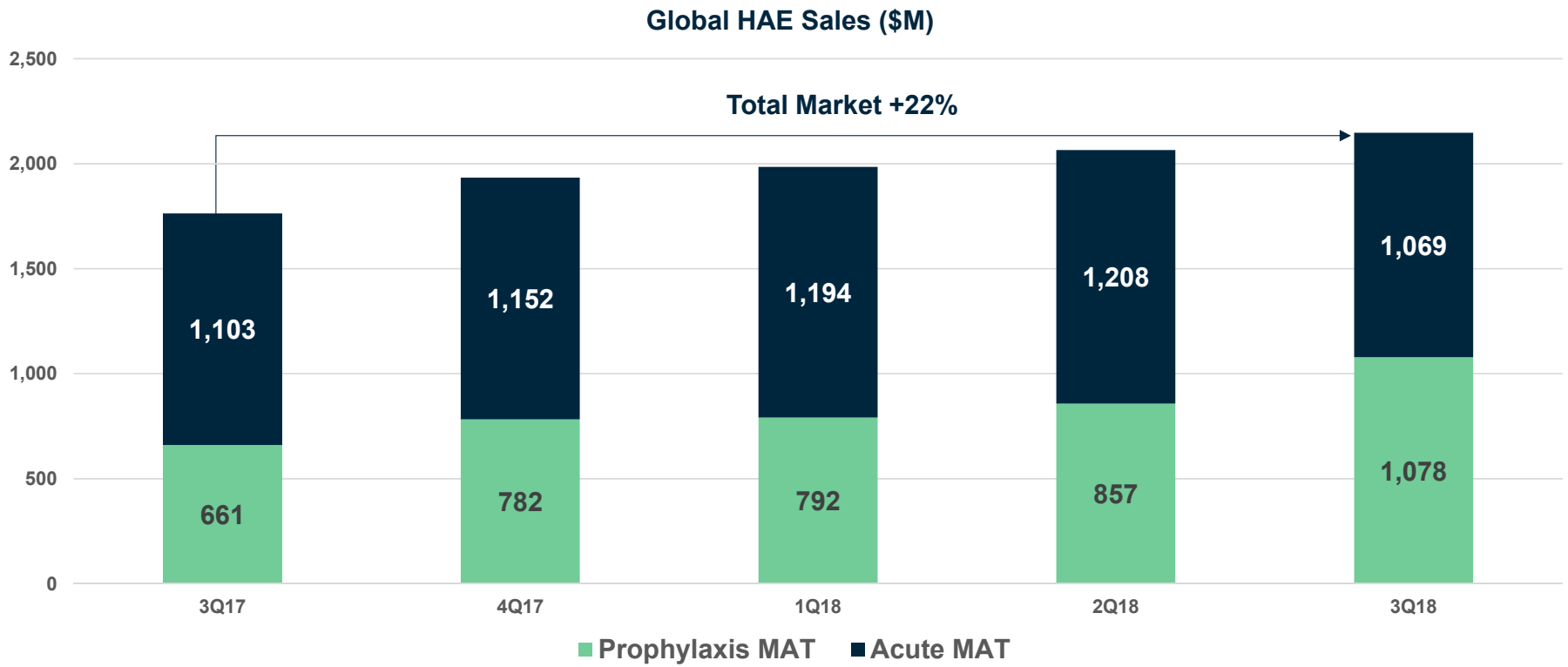
Over $10 Billion Global Market Opportunity

Significant pipeline potential for a differentiated oral complement inhibitor

* SOLIRIS® (eculizumab) 2018 sales in paroxysmal nocturnal hemoglobinuria (PNH), atypical hemolytic uremic syndrome (aHUS), and generalized myasthenia gravis (gMG) reported 2/4/19
** Additional potential orphan indications for complement inhibitors include, but are not limited to, neuromyelitis optica (NMO), ANCA-associated vasculitis (AAV), C3 glomerulonephritis (C3G), IgA nephropathy (IgAN), warm autoimmune hemolytic anemia (wAIHA), focal segmental glomerulosclerosis (FSGS), and cold agglutinin disease (CAD)

Annualized HAE Sales over $2.1 Billion Through 3Q18

Haegarda (3Q17) and Takhzyro (3Q18) launches driving prophylaxis past 50% of MAT sales

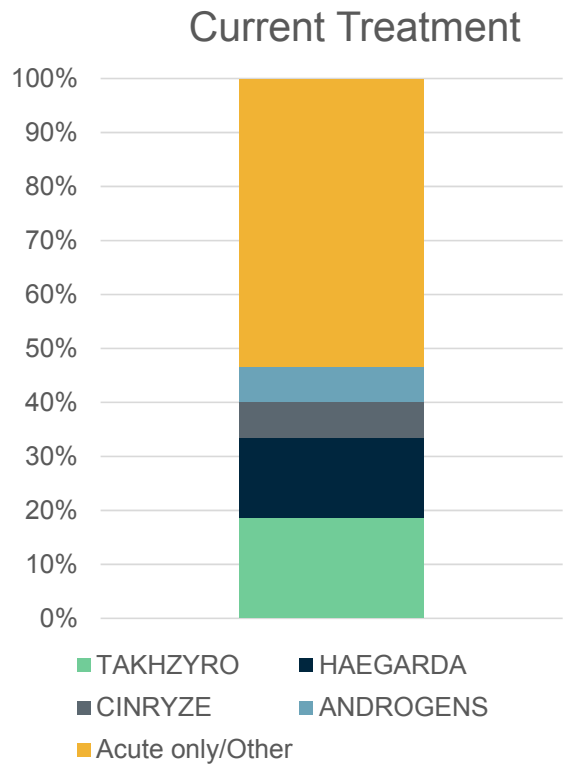


Sales based on actual reported sales for Shire products; actual reported sales for Pharming through 2Q18 and estimates through Q3; and estimates for CSL products based on publicly reported data and comments in 2017 and 2018.

MAT= Moving Annual Total

HAE Patients Really Want Oral Prophylaxis

US HAE patient survey fielded November 2018 (n=75)



*An oral preventative HAE medication **would fit my life better** than an injectable HAE medication*

97% agree

*I like my current preventative HAE medication, but if an oral preventative HAE medication became available, **I would switch** to that new medication**

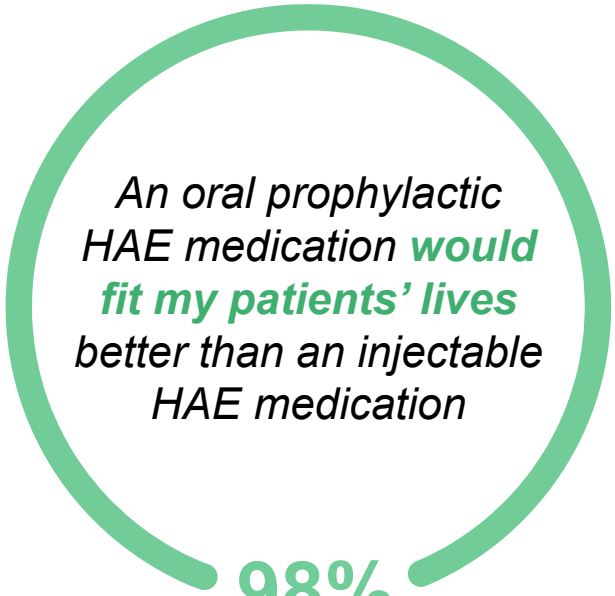
89% agree

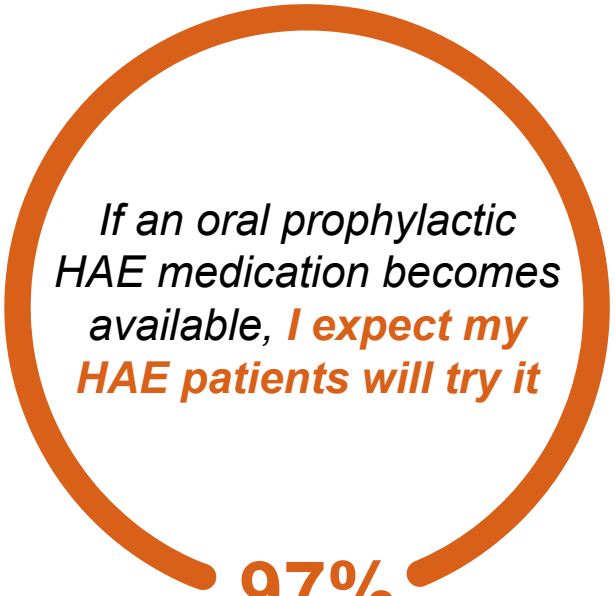
*10 out of 14 patients on TAKHZYRO agreed with this statement

ALL QUALIFIED RESPONDENTS
Q600-609 Please read the following statement and indicate if you agree or disagree.

Allergists Understand what HAE Patients Want

US allergist survey: November 2018 (n=100)





ALL QUALIFIED RESPONDENTS
Q600-609 Please read the following statement and indicate if you agree or disagree.

Financial Update:

$100 million debt facility adds financial flexibility

Strong cash position extending into 2020

Fourth Quarter Operating Results

(in thousands, except per share amounts)	Q4 2018	Q4 2017	Change Q4 2018 vs Q4 2017
Revenues:			
Royalty revenue	$ 1,775	$ 3,291	(46%)
Collaborative and other R&D	954	599	59%
Total revenues	2,729	3,890	(30%)
Expenses:			
Research and development	23,431	16,924	38%
General and administrative	4,490	4,698	(4%)
Royalty	70	129	(46%)
Total operating expenses	27,991	21,751	29%
Loss from operations	(25,262)	(17,861)	41%
Interest and other income, net	686	478	44%
Interest expense	(2,414)	(2,231)	8%
(Loss) gain on foreign currency derivative	(442)	71	(723%)
Net loss	$ (27,432)	$ (19,543)	40%
Net loss per share - Basic & Diluted	$ (0.25)	$ (0.20)	25%
Net operating cash utilization	$ 22,634	$ 10,125	124%
Weighted average shares outstanding	109,802	98,402	

Cash Position & 2019 Guidance (in Millions)

Cash & investments at December 31, 2017	$159
Cash & investments at December 31, 2018[A]	**$128**
Senior Credit Facility [A]	$30
FY 2019 GUIDANCE	
Operating cash utilization	**$105 – 130**
Operating expenses [B]	**$120 – 145**

A - Credit Facility was modified in February 2019 to provide an additional $20 upon closing and the ability to draw an additional $50 of milestone-based tranches.

B - Excludes equity-based compensation.

Thank You…
Questions and Answers