JMP Securities Life Sciences Conference

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Forward-Looking Statements

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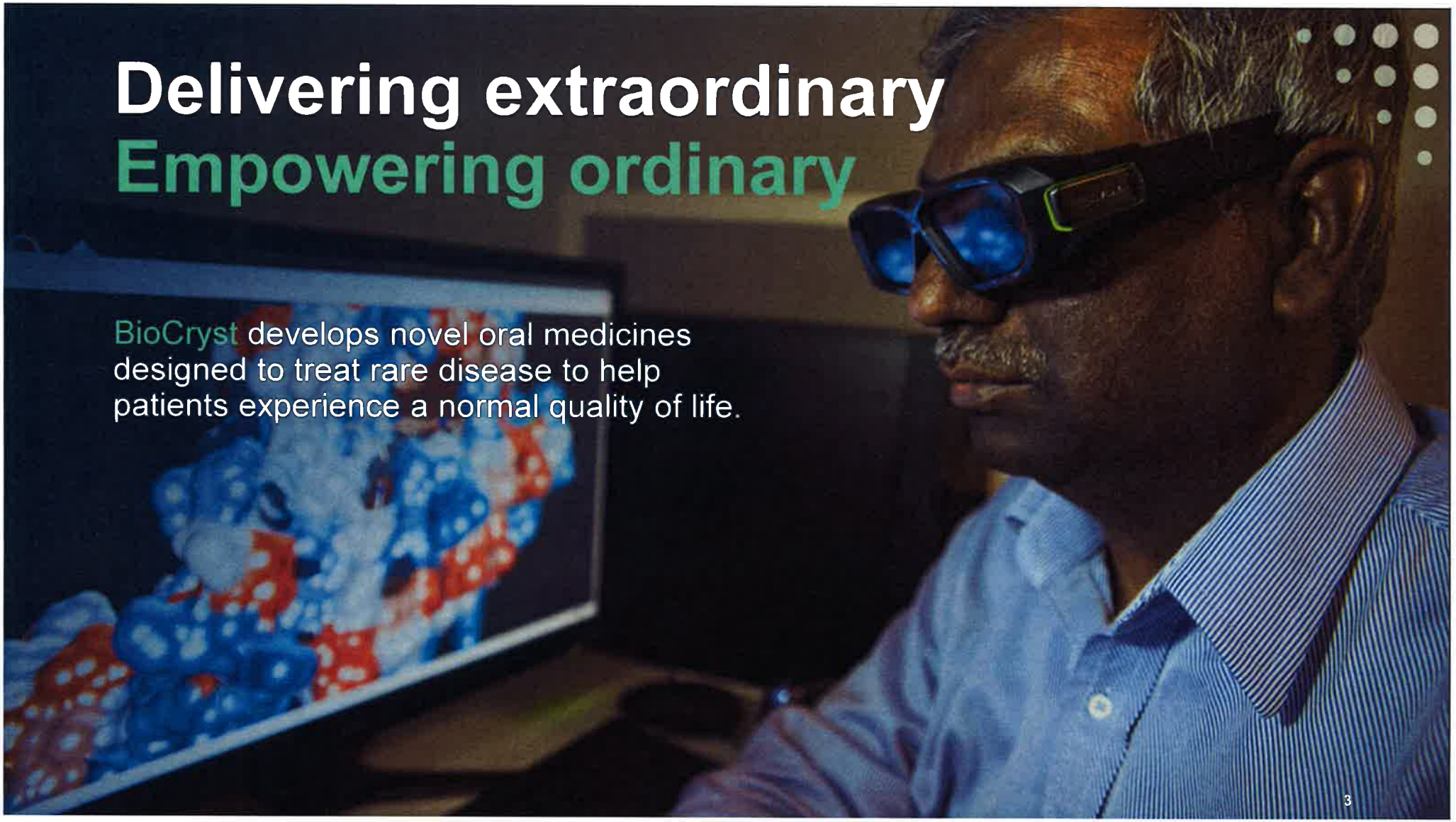

Delivering extraordinary
Empowering ordinary
BioCryst develops novel oral medicines designed to treat rare disease to help patients experience a normal quality of life.

BioCryst HAE Prophylactic Program (BCX7353)

Responder Analyses for BCX7353 150 mg

APeX-2 Primary Endpoint (150mg): 44% overall reduction in HAE attack rate vs placebo (p<0.001)

Response outcome	Placebo n=39*	BCX7353 150 mg n=40		
	Percent	Percent	Odds ratio	P value ‡
≥ 50% reduction	25.0	57.5	3.9	0.005
≥ 70% reduction	**15.0**	**50.0**	**5.6**	**0.002**
≥ 90% reduction	**7.5**	**22.5**	**3.6**	**0.073**

** One of 40 placebo subjects did not receive blinded study drug and did not contribute attack rate information after randomization*
‡ Logistic regression model

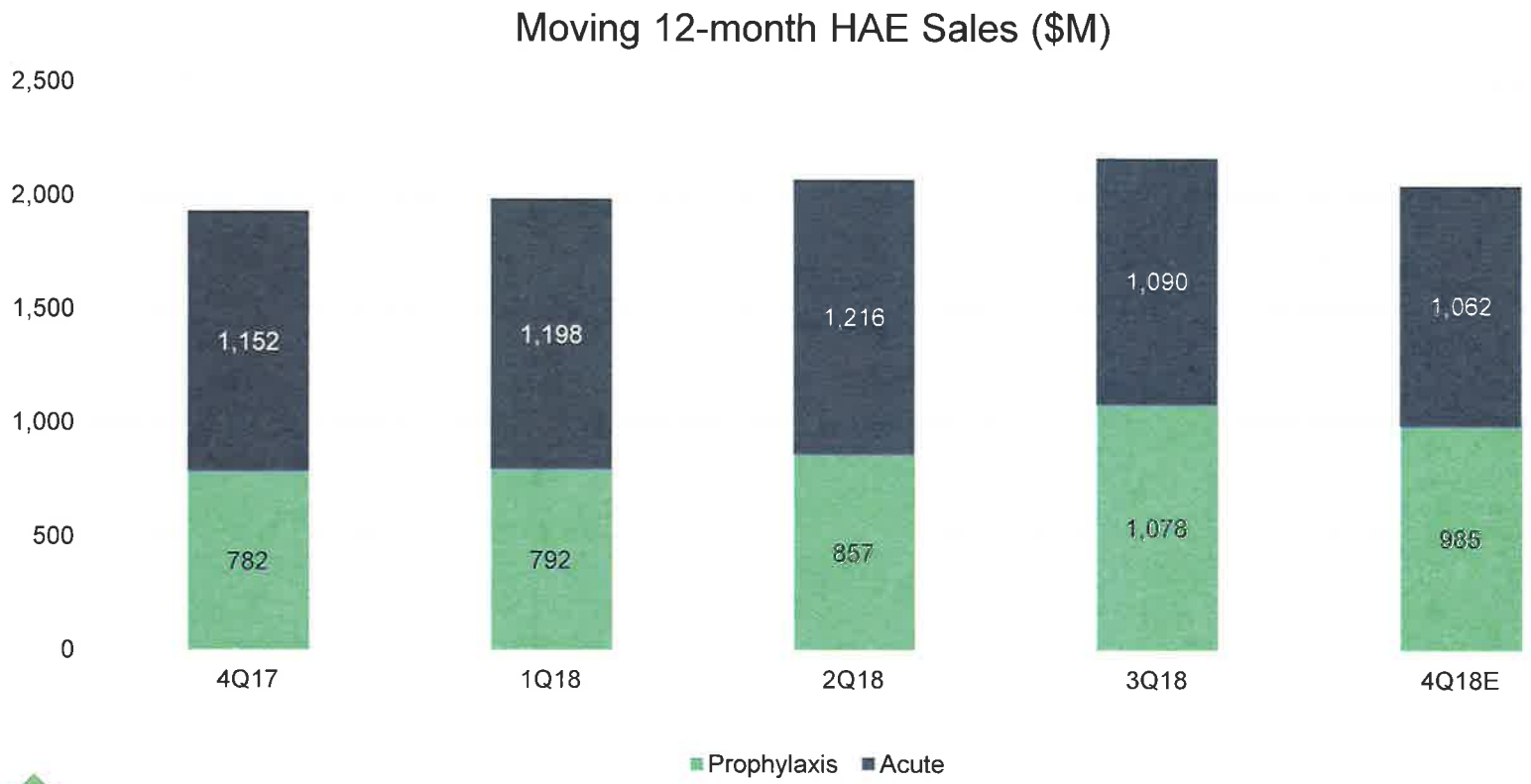
Overall Safety Summary

Treatment-emergent (TE) Adverse Events (AEs) or Discontinuations (DCs) due to TEAEs	BCX7353 110 mg	BCX7353 150 mg	Placebo
	N = 41	N = 40	N = 39*
Drug-Related TE Serious AEs	0	0	0
Most common Drug-Related AEs			
Nausea	4 (9.8%)	3 (7.5%)	6 (15.4%)
Dyspepsia	4 (9.8%)	3 (7.5%)	2 (5.1%)
Diarrhea	3 (7.3%)	4 (10.0%)	0
DCs due to TEAEs	3 (7.3%)	1 (2.5%)	1 (2.6%)
DCs due to Abdominal-Related GI TEAEs	1 (2.4%)	0	0
DCs due to Abnormal Liver Function Test	0	1 (2.5%)	0

** One of 40 placebo subjects did not receive blinded study drug and did not contribute attack rate information after randomization*

Global HAE Sales Exceeded $2.0 Billion in 2018

Prophylactic sales were 48% of total compared to 40% in 2017

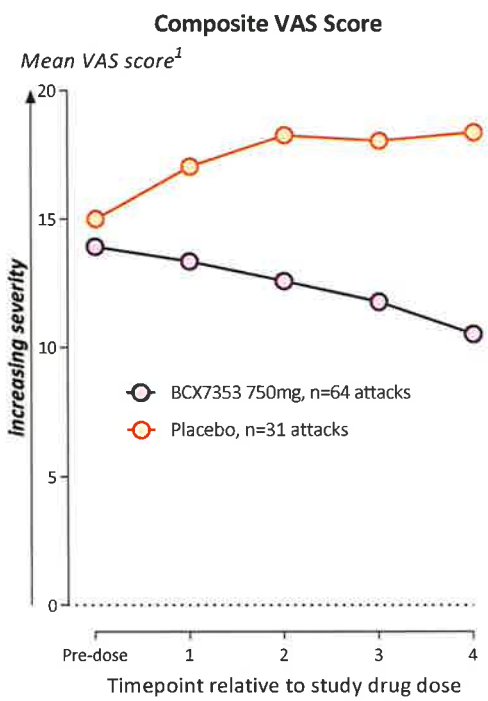


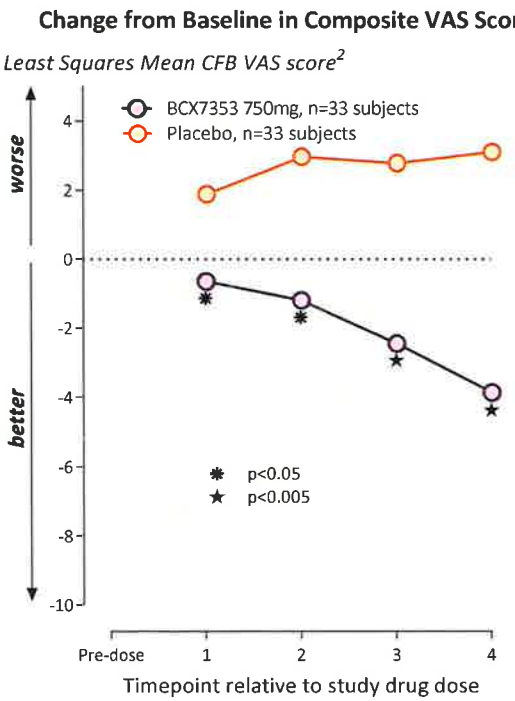
Key Conclusions from APeX-2 Topline Data

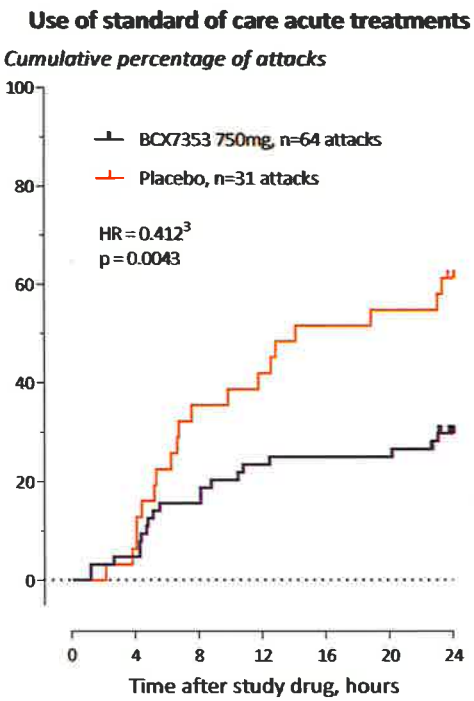
- **BCX7353 is approvable**
  - Clinically meaningful attack rate reduction ($p<0.001$) on primary endpoint for both doses
  - Excellent safety/tolerability profile
  - Consistent dose response across endpoints
  - New treatment option (oral) meeting significant unmet medical need
- **Significant reduction in attack rate for many patients will drive high trial usage rates**
  - 23% of patients had ≥ 90% reduction in attack rate
  - 50% of patients had ≥70% reduction in attack rate
- **BioCryst will lower barriers to enable/accelerate first-line access in U.S/EU/RoW**
- **Tremendous excitement about data from physicians and patients**

BioCryst HAE Acute Treatment Program (BCX7353)

Rapid and sustained benefit from BCX7353







Values after standard of care treatments are excluded.

[1] *The 3-symptom composite VAS was calculated as the average of three individual VAS scores of abdominal pain, cutaneous pain, and cutaneous swelling.*

[2] *Comparisons were performed separately at each time point using a mixed effect linear model including treatment, period and sequence as fixed effects, subject within sequence as a random effect, and predose 3-symptom composite VAS score as a covariate.*

[3] *Cox regression model for analysis of clustered data with time to event as the dependent variable and fixed effects for treatment, sequence and period. Subject was included in the model as a cluster variable.*

ZENITH-1 – Safety Summary

	BCX7353			All
	750 mg	500 mg	250 mg	Placebo
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.

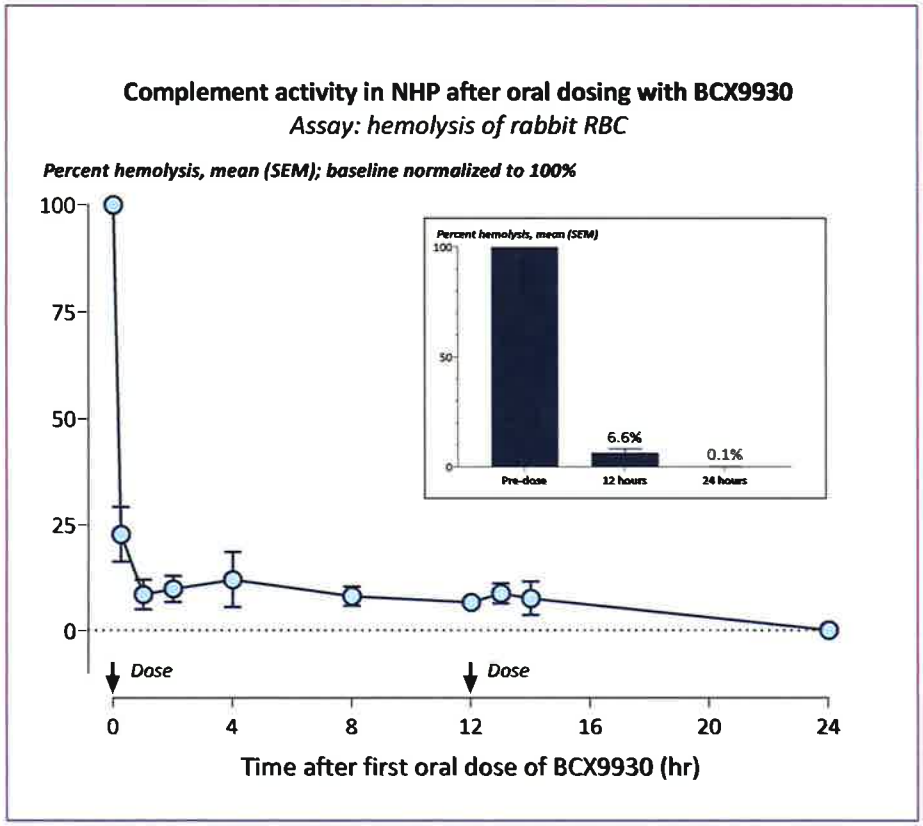
§ Discontinuation on placebo occurred in a subject who experienced abdominal pain on both active and placebo drug. The decision to stop study drug occurred after the placebo dose.

¥ The serious TEAEs of Motor vehicle 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)

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

Cash into position & 2019 guidance (in millions)

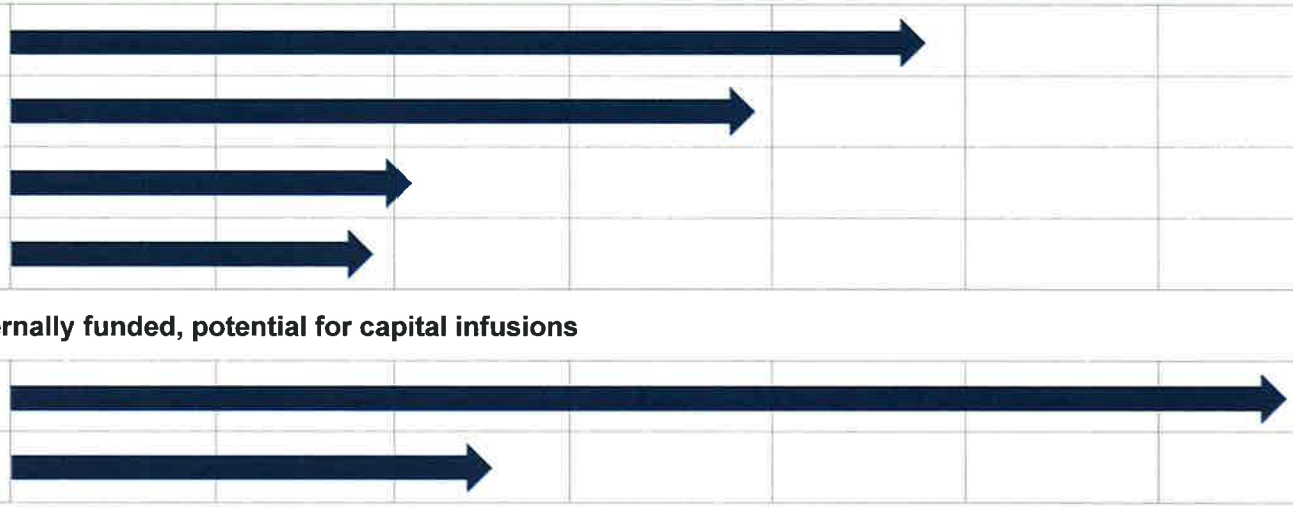
Cash & investments at December 31, 2018	$128
Cash & investments at March 31, 2019	**$122**
Senior Credit Facility [A]	$50
FY 2019 GUIDANCE	
Operating cash utilization	**$105 – 130**
Operating expenses [B]	**$120 – 145**

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.

BioCryst's Robust Pipeline

	Lead Optimization	Pre-clinical	Phase 1	Phase 2	Phase 3	Filed	Approved
STRATEGY: Develop oral therapies for life-threatening, rare diseases							
BCX7353 – Oral Capsule (Prophylactic HAE)							
BCX7353 – Oral Formulation (Acute HAE)							
BCX9930 – Oral Factor D Inhibitor Complement-Mediated Diseases							
BCX9250 (FOP)							
SUPPORTING ASSETS: Externally funded, potential for capital infusions							
RAPIVAB® (peramivir injection)*							
Galidesivir (Broad spectrum antiviral) I.V.							



*Licensed to Seqirus, Shionogi and Green Cross

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