UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **November 29, 2023**

BiomX Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**001-38762**	**82-3364020**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

22 Einstein St., Floor 4 Ness Ziona, Israel	**7414003**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: **+972 723942377**

n/a
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Units, each consisting of one share of Common Stock, $0.0001 par value, and one Warrant entitling the holder to receive one half share of Common Stock	PHGE.U	NYSE American
Shares of Common Stock, $0.0001 par value	PHGE	NYSE American

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Item 7.01 Regulation FD Disclosure.

BiomX Inc., or the Company, from time to time, presents and/or distributes to the investment community at various industry and other conferences slide presentations to provide updates and summaries of its business. On November 29, 2023, the Company posted an updated corporate slide presentation in the "Investors" portion of its website at www.biomx.com. A copy of the slide presentation is furnished pursuant to Item 7.01 as Exhibit 99.1 hereto. The Company undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.1

Item 8.01 Other Events.

On November 29, 2023, the Company announced positive safety and efficacy results from Part 2 of the Phase 1b/2a trial evaluating the Company's novel phage cocktail, BX004, for the treatment of chronic pulmonary infections caused by Pseudomonas aeruginosa (or P. aeruginosa) in patients with cystic fibrosis ("CF"). Highlights included:

- Study drug was safe and well-tolerated, with no related SAEs (serious adverse events) or related APEs (acute pulmonary exacerbations) to study drug.
- BX004 vs. placebo showed a positive clinical effect in a predefined subgroup of patients with reduced baseline lung function (FEV1<70%). Difference between groups at Day 17: relative FEV1 improvement of 5.67% (change from baseline +1.46 vs. -4.21) and +8.87 points in CFQR respiratory symptom scale (change from baseline +2.52 vs. -6.35).
- In the BX004 arm, 3 out of 21 (14.3%) patients converted to sputum culture negative for *P. aeruginosa* after 10 days of treatment (including 2 patients after 4 days) compared to 0 out of 10 (0%) in the placebo arm.

- In full population, BX004 vs. placebo *P. aeruginosa* levels were more variable in sputum, potentially driven by the standard of care antibiotic treatment regimen. In a prespecified subgroup of patients on standard-of-care inhaled antibiotics on continuous regimen, BX004 vs. placebo reduced sputum *P. aeruginosa* levels at Day 10: difference in change from baseline between groups of -2.8 $\log_{10}$ CFU/g sputum (change from baseline -2.91 vs -0.11), exceeding Part 1 results.

- Alternating/cycling background antibiotic regimen likely associated with fluctuations in *P. aeruginosa* levels potentially confounding the ability to observe a *P. aeruginosa* reduction in this subgroup.

- During the study period, no evidence of treatment emergent phage resistance was observed in patients treated with BX004 compared to placebo.

- The Company plans to advance the BX004 program to a larger, pivotal Phase 2b/3 trial, subject to regulatory feedback and availability of sufficient funding.

Safe Harbor

This Current Report on Form 8-K contains express or implied "forward-looking statements" within the meaning of the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: "target," "believe," "expect," "will," "may," "anticipate," "estimate," "would," "positioned," "future," and other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. For example, when the Company discusses the safety, tolerability and efficacy of BX004 and its potential ability to treat CF patients, as well as the potential to advance the BX004 program to a larger, pivotal Phase 2b/3 trial, including, among other things, timing, design, enrollment, regulatory feedback and approvals and funding of such trial, it is making forward-looking statements. In addition, past and current pre-clinical and clinical results, as well as compassionate use, are not indicative and do not guarantee future success of the Company's clinical trials. Further, the Company continues to analyze the results of the BX004 Phase 1b/2a Part 2 clinical trial and upon further analysis it may come to conclusions that are different than the ones that are outlined in this presentation. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on the Company's management's current beliefs, expectations and assumptions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of the Company's control. Actual results and outcomes may differ materially from those indicated in the forward-looking statements. Therefore, investors should not rely on any of these forward-looking statements and should review the risks and uncertainties described under the caption "Risk Factors" in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission, or the SEC, on March 29, 2023 and additional disclosures the Company makes in its other filings with the SEC, which are available on the SEC's website at www.sec.gov. Forward-looking statements are made as of the date of this Current Report on Form 8-K, and except as provided by law the Company expressly disclaims any obligation or undertaking to update forward-looking statements.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit	Description
99.1	Investor Presentation dated November 29, 2023
104	Cover Page Interactive Data File (embedded within the Inline XBRL documents)

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

BIOMX INC.

November 29, 2023

By: /s/ Jonathan Solomon
Name: Jonathan Solomon
Title: Chief Executive Officer

Exhibit 99.1

BiomX

Revolutionizing the treatment of Cystic Fibrosis through our unique BOLT Phage therapy platform

Investor Presentation / November 2023

Safe Harbor Statement

This presentation contains certain "forward-looking statements" within the meaning of the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: "target," "believe," "expect," "will," "may," "anticipate," "estimate," "would," "positioned," "future," and other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on BiomX management's current beliefs, expectations and assumptions. For example, when we discuss future potential clinical trials, including their design, objectives, costs, endpoints, potential benefits and timing, the potential outcomes of discussions that we may have with the U.S. Food and Drug Administration and foreign regulatory agencies, potential commercial opportunities, our expected cash runway, our financial needs to fund future clinical trials and our ability to protect our intellectual property assets in the future we are making forward-looking statements. In addition, past and current pre-clinical and clinical results, as well as compassionate use, are not indicative and do not guarantee future success of BiomX clinical trials. Further, we continue to analyze the results of the BX004 Phase 1b/2a Part 2 clinical trial results and upon further analysis we may come to conclusions that are different that the ones that are outlined in this presentation. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Actual results and outcomes may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. You should review additional disclosures we make in our filings with the Securities and Exchange Commission (the "SEC"), which are available on the SEC's website at www.sec.gov. Except as required by law, we are under no duty to (and expressly disclaim any such obligation to) update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise.

Executive Summary

Unmet need in cystic fibrosis ('CF')	• Improved treatment has shifted CF from being a disease of childhood to a disease of adulthood. As patients age, *Pseudomonas aeruginosa (PsA)* lung infections become the leading cause of morbidity and mortality • Prolonged antibiotic treatments lead to significant resistance, creating a large unmet need - an estimated 17,000 CF patients in the US and Western Europe with chronic *PsA* infections[1]
 **BX004 – our lead program**	• BX004, our proprietary phage cocktail, has the potential to treat CF patients with chronic resistant *PsA* lung infections, providing a significant potential commercial opportunity of > $1 billion[2] • In a Phase 1b/2a, BX004 showed clinically meaningful improvement in pulmonary function vs. placebo, in relative FEV1[3] improvement (5.67% at Day 17, 1 week after EOT[3]) and PRO[3] in patients with reduced lung function[4] • In the BX004 arm, 3 out of 21 (14.3%) patients converted to sputum culture negative for *PsA* after 10 days of treatment compared to 0 out of 10 (0%) in the placebo arm[5] • Plans to advance the BX004 program to a larger, pivotal Phase 2b/3 study[6]
Bolt Our Bolt phage technology	• Our proprietary BOLT phage technology platform - which is based on advanced machine learning – was used to design the BX004 phage cocktail that *in vitro* overcomes antibiotic resistance and biofilms
Financing and investors	• Publicly traded **(NYSEAmerican:PHGE)** • $23.4 million cash and cash equivalents as of September 30, 2023. Expected cash runway into the third quarter of 2024 • Backed by prominent biotech investors such as Orbimed, Johnson & Johnson and the CF Foundation

1. See slide 10
2. See slide 27
3. FEV1 or ppFEV1 – percent predicted forced expiratory volume, EOT – End of treatment, PRO – Patient reported outcome
4. Predefined group with Baseline FEV1<70%
5. In patients that had quantitative CFU levels at study baseline
6. Subject to regulatory feedback and availability of sufficient funding

Strong leadership and scientific team

Management

Jonathan Solomon - Chief Executive Officer, Director
- *Former co-Founder and CEO Proclara*

Merav Bassan, PhD - Chief Development Officer
- *20 years drug and clinical development at Teva*

Assaf Oron - Chief Business Officer
- *Former EVP business development at Evogene*

Marina Wolfson, CPA - Chief Financial Officer
- *Former Bioview, Ernst & Young*

Inbal Benjamini-Elran – Chief HR Officer
- *Former HR roles at Teva and Herzog Law*

Board of Directors

Russell Greig, PhD - Chairman of the Board
- *Former president of GSK Pharma International & SR one, GSK corporate venture group*

Alan Moses, MD - Director
- *Former Global Chief Medical Officer of Novo Nordisk*

Lynne Sullivan - Director
- *Former Senior Vice President of Finance for Biogen*

Jason Marks - Director
- *Former Executive Vice President, Chief Legal and Compliance Officer at Amarin Corporation plc*

Michael Dambach - Director
- *Vice President and Treasurer of Biogen Inc.*

Eddie Williams - Director
- *Former special advisor to the CEO of Ascendis Pharma, Inc.*

Scientific Team

Prof. Rotem Sorek
- *Head of microbial genomics group at Weizmann Institute*
- *Phage genomics and CRISPR research*

Prof. Eran Elinav
- *Principal investigator at Weizmann Institute*
- *Immune system and intestinal microbiome interactions*

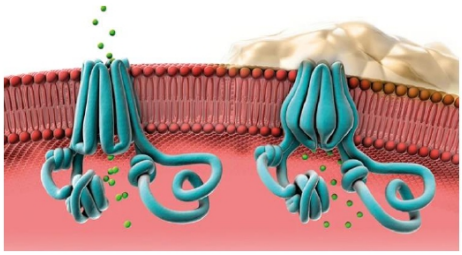
Prof. Timothy K. Lu
- *Associate professor leading synthetic biology group, MIT*
- *Synthetic biology, biochemical engineering*

Prof. Eitan Kerem
- *Former Chairman of Pediatric Pulmonology Unit, Hadassah Medical Center*
- *World leader in CF care and research*

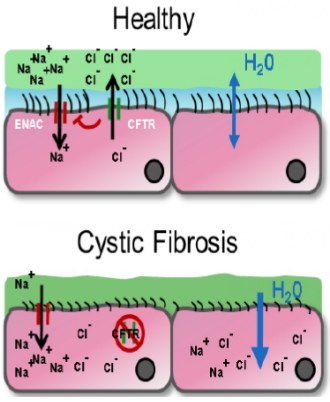
CYSTIC FIBROSIS
The Unmet Need

CF is an inherited disease caused by a mutation on the CFTR protein

- The CFTR protein is present on epithelial cells throughout the body. It is a chloride ion channel involved in maintaining water and ion homeostasis on cell surfaces
- The disease causes severe damage to the lungs, digestive system and other organs with > 80% of deaths from respiratory failure
- 105K individuals are estimated to live with CF worldwide, with 33k in the US alone



Normal (left) and abnormal CFTR proteins (right)

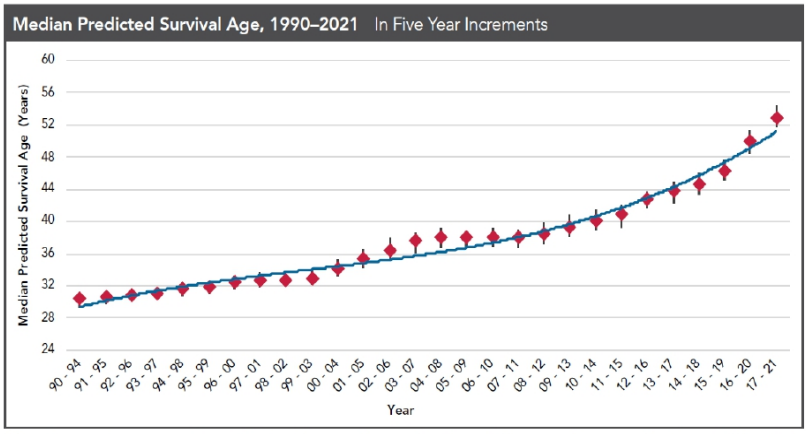


- Light blue – periciliary layer
- Green – mucus layer

In CF lungs, mutations cause thick and sticky mucus that provides environment for bacteria to infect and propagate. In the less hydrated periciliary layer, the cilia are flattened and the ability to clear bacterial infection reduced.

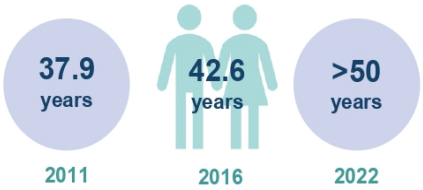
CF Foundation estimates across 94 countries (https://www.cff.org/intro-cf/about-cystic-fibrosis)
Plackett, Nature 2020
Gibson et al., 2003; Stuart et al., 2010

Declining incidence is offset by increased survival through improved treatment resulting in CF being shifted from being a disease of childhood to being a disease of adulthood



Using the currently recommended method for calculating median predicted survival. For more information about the methodology, please see the Technical Supplement available at cff.org.

PREDICTED MEDIAN SURVIVAL AT BIRTH



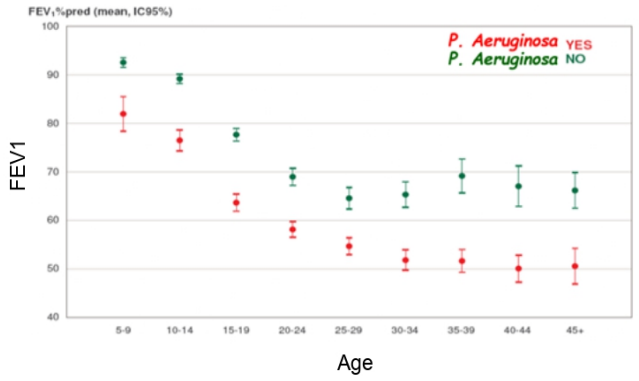
Improvements driven by introduction of life-changing medicines

CFF 2021 patient registry annual data report , NACFC (North American CF Conference) Oct. 2021 plenary session

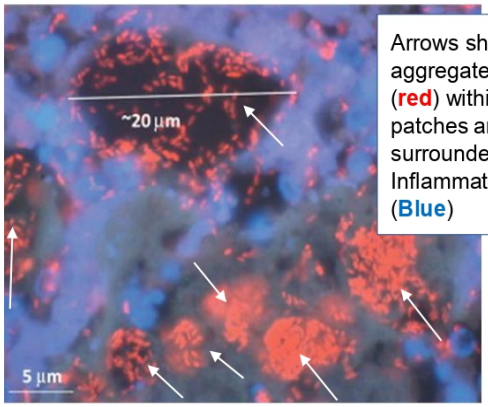
BiomX

Pseudomonas aeruginosa (*PsA*) bacteria are associated with decreased lung function (FEV1) and damaged lung epithelium

PsA colonization associated with lower FEV1 at all ages[1]



PsA forms biofilm patches in the lungs[2]



Arrows show aggregates of PsA (**red**) within biofilm patches and surrounded by Inflammatory cells (**Blue**)

PsA bacteria and biofilm lead to persistent inflammation causing tissue damage and eventually necrosis of lung tissue

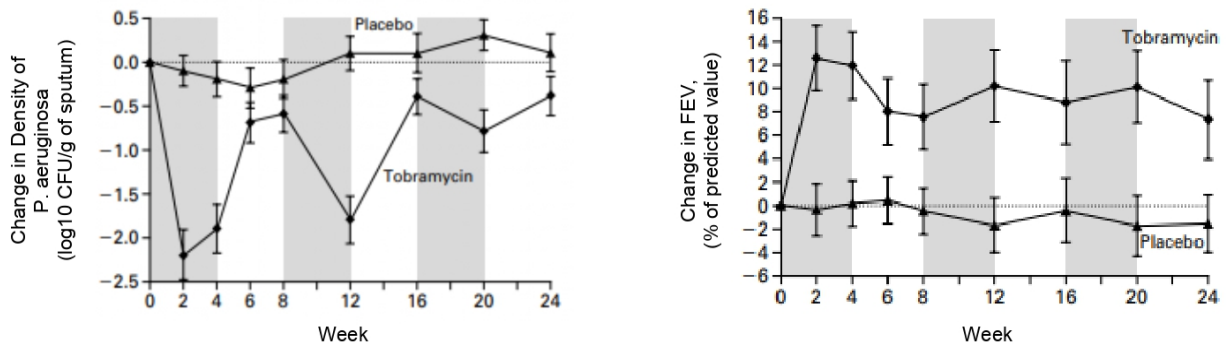
1. Kerem et al., ECFS unpublished data, 2013
2. Bjarnsholt at al., Trends in Microbiology 2013

BiomX

Antibiotics were effective 2 decades ago in treating *PsA* infections

Tobramycin showed (study conducted 1995-96) up to **2.2 log bacterial reduction** and **8-12% FEV1 improvement** (compared to placebo)

Phase 3 Efficacy and Safety Study of Tobramycin Inhaled Solution (1995-96)*

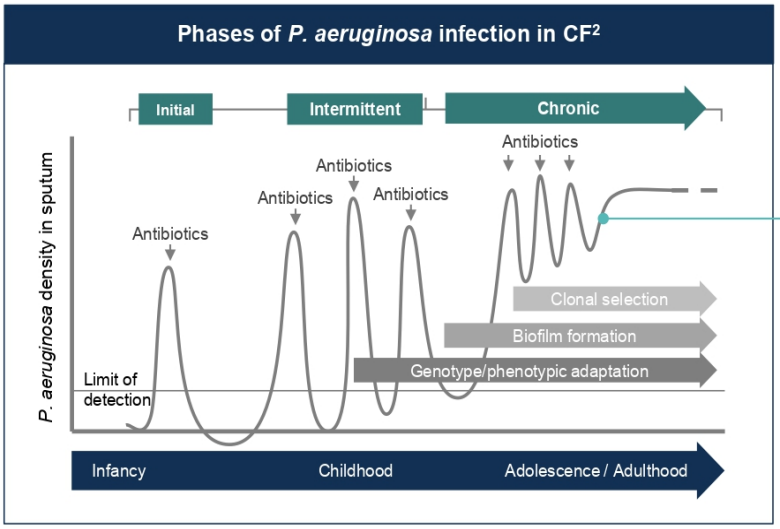


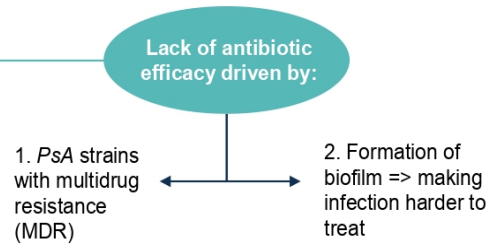
Over the last 2 decades, with the rise of antibiotic resistance, benefits of inhaled antibiotics have diminished

*n=520; 52% >18 yrs; treated in 28 day on/off cycles
B.W. Ramsey et al., (N Engl J Med 1999;340:23-30.

Chronic *PsA* infections have become a persistent problem due to antibiotic resistance driving morbidity and mortality in CF

- Chronic pulmonary infections and the resulting robust but ineffective inflammatory response, culminating in respiratory failure, are the primary causes of death in CF patients
- After prolonged and repeated antibiotic courses, increased resistance to antibiotics has lowered efficacy, creating a large unmet need for CF patients suffering from chronic *PsA* - Estimated at **17,000 patients in the US and Western Europe**[1]





1. CFF Annual Data Report 2019, ECFS patient registry report, 2020
2. Nicole M. Bouvier et al., 2016

BiomX

BX004 – BiomX's proprietary phage cocktail targeting *PsA* has the potential to treat CF patients with chronic *PsA* lung infections

BX004

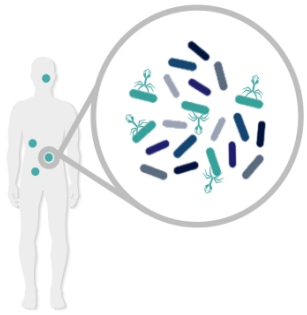
- **Product** – Proprietary phage cocktail targeting *PsA*
- **Patient population** – CF patients with chronic *PsA* lung infections
- **Delivery** – Nebulized
- **Key features** – Potentially effective on antibiotic resistant strains, enables breakdown of biofilm
- **Potential impact:**
  - Suppression/eradication of *PsA* (CFU in sputum)
  - Improved lung function (FEV1)
  - Fewer exacerbations, hospitalizations
  - Increased efficacy of antibiotic treatment
  - Reduce oral, inhaled and IV antibiotic treatments

Intro To
PHAGE

Phage: Nature's precision tool to target bacteria

1. SPECIFIC

Each phage binds only to specific bacterial strains



2. KILLING MECHANISM ORTHOGONAL TO ANTIBIOTICS

Lysin proteins burst bacterial cell wall from within

3. BREAKDOWN BIOFILM

Phage can breakdown biofilm (a polysaccharide mesh secreted by bacteria)

4. AMPLIFY

Phage components multiply and assemble within bacterial cell

5. SAFETY PROFILE

100s of compassionate use cases with no significant side effects to date

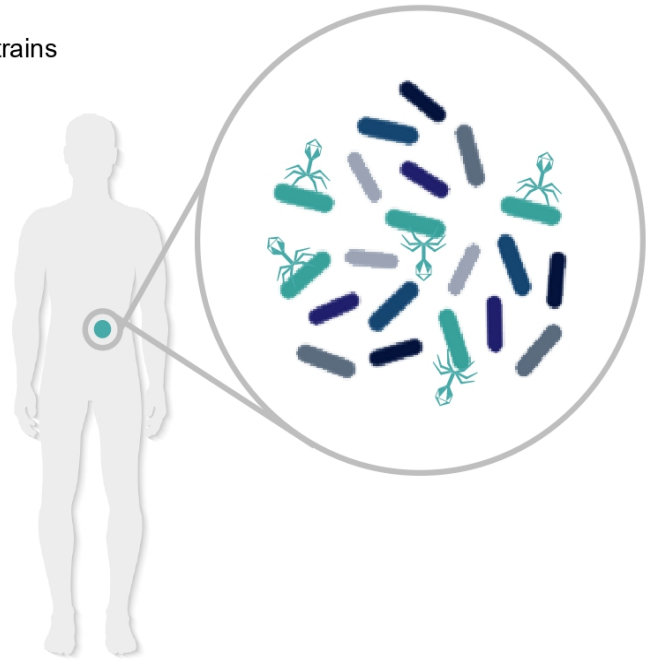
Kortright et al. (2019), Cell Host & Microbe

Key challenges in developing phage therapies

- **Host range -** Narrow specificity to a subset of bacterial strains
- **Resistance -** Bacterial defense systems (e.g. CRISPR)
- **CMC –** Manufacturing (e.g. purity, stability)

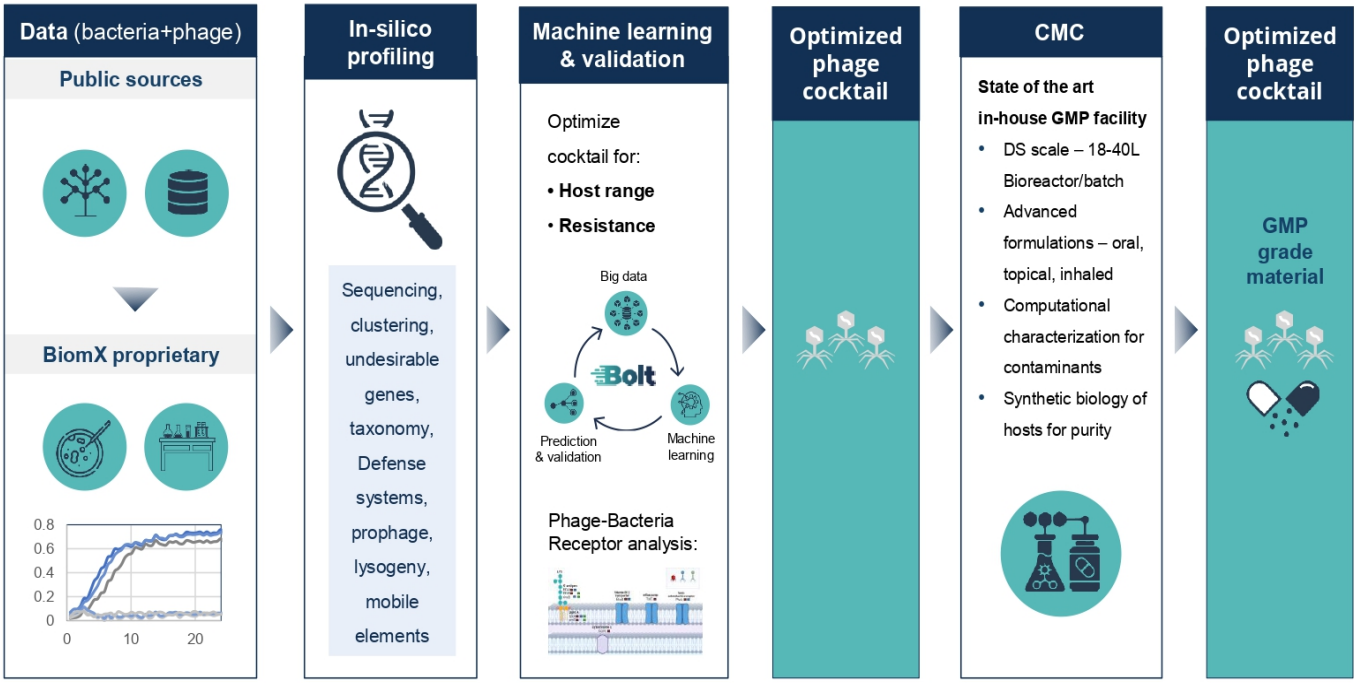
And many other considerations

- Phage titer
- Biofilm breakdown
- Absence of toxic genes
- Other



Phagoburn study The Lancet, inf..Dis.2019 Jan;19(1):35-45.doi: 10.1016/S1473-3099(18)30482-1.
Nestle study: E.BioMedicine 2016 Jan 5;4:124-37. doi: 10.1016/j.ebiom.2015.12.023.
Patterson case: Antimicrob Agents Chemother 2017 Sep 22;61(10):e00954-17. doi: 10.1128/AAC.00954-17.

The BiomX Bolt platform addresses the key challenges in phage therapy development



BX004

Numerous compassionate treatments of CF patients with phage provide strong rationale for the development of BX004

11 CF patients treated for *P. aeruginosa* [1-4]

- Indication - *P. aeruginosa* AMR lung infections
- Location – 8 Yale University, 2 Georgia, 1 San-Diego
- Administration – 10 nebulized, 1 IV phage

Yale cases:

- eIND path for 8 CF patients
- Nebulized phage
- 7-10 days, single or multiple rounds
- **Post phage therapy *P. aeruginosa* CFU titers decreased significantly (2.2 ± 0.76 log reduction)**
- **Outcome - FEV1% increased in a range of 0 to 8.9%**

14 CF patients treated for Mycobacterium (20 patient total) [5]

- Indication - Non-tuberculous Mycobacterium infections. Lung infections in all CF patients
- Location – San Diego (UCSD)
- Administration – 20 IV, certain patient also received nebulized/topical/ other routes

UCSD cases:

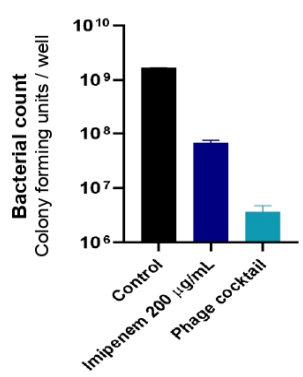
- eIND path for all patients
- IV phage (+ additional nebulized phage for certain patients)
- Twice daily for ~6 months (though a favorable outcome required improvement within 8 weeks)
- **Outcome - Favorable clinical or microbiological responses in 11/20 patients (for 5 patients infection resolved)**

Results demonstrate the potential to decrease bacterial burden and improve clinical outcome

1. Kutateladze et al., 2008
2. Kvachadze et al., 2011
3. Law et al., 2019
4. Stanley et al., 2020
5. Dedrick et al. 2022

BX004 has demonstrated *in vitro* penetration of biofilm and activity on antibiotic resistant *PsA* strains

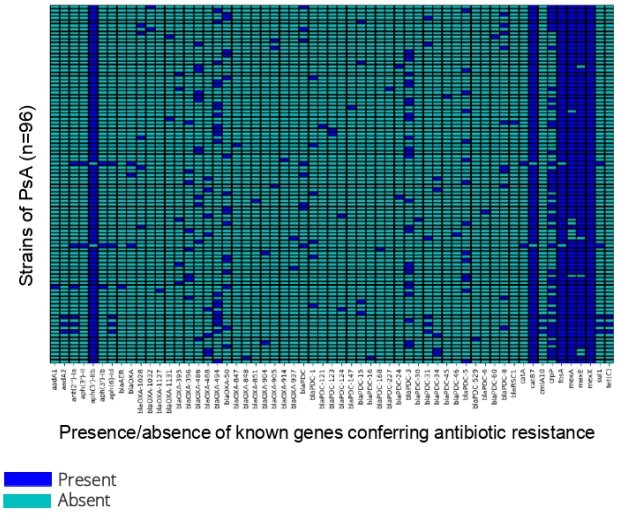
BX004 penetrates biofilm *in vitro*



Biofilm was grown from *PsA* for 24 hours and then treated with BX004 for 6 hours (control-untreated wells). Treatment with antibiotics not shown
Crystal violet – Used for biomass staining of biofilm. Staining substantially reduced following treatment with BX004

BX004 active *in vitro* on antibiotic resistant *PsA* strains

BX004 was active in killing all 96 strains described below displaying multiple antibiotic resistant genes



BiomX internal results

Phase 1b/2a study Part 1 – Study design

Part 1 (n=9)

Objectives

- Safety, PK and microbiologic/clinical activity

Endpoints

- Safety and tolerability (Primary endpoint)
- Decrease in *PsA* burden
- Sputum pharmacokinetics
- FEV1 (forced expiratory volume)
- CFQ-R (CF Questionnaire-Revised) and CRISS

Study Population

- CF patients with chronic *PsA* infection
- Physician choice of inhaled antibiotic regimen (continuous or alternating or cycling); on tobramycin, aztreonam or colistin during study drug
- No restriction on CFTR modulators

9 Subjects

- 7 received nebulized BX004 phage therapy
- 2 received nebulized placebo
- 7 days duration (3 ascending, 4 multiple dosing)

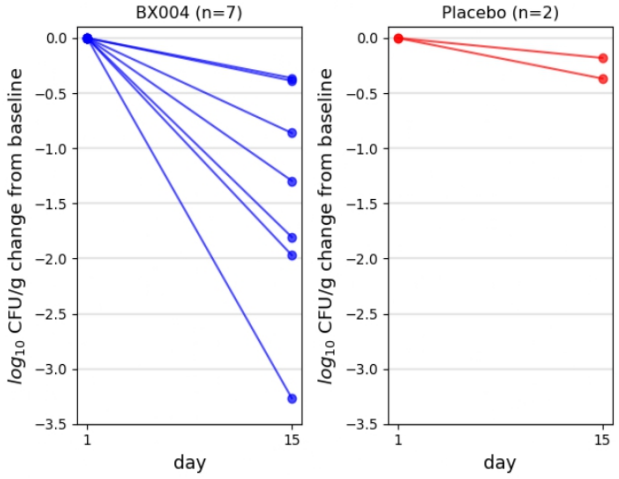
Key Design Features

- Single ascending dose followed by multiple doses

Completed

Phase 1b/2a Part 1 results - Highlights

- Study drug was safe and well-tolerated
- Mean *P. aeruginosa* CFU[1] reduction at Day 15 (compared to Baseline): **-1.42 log_{10} CFU/g** (BX004) **compared to -0.28 log_{10} CFU/g** (placebo) on top of standard of care inhaled antibiotics
- Phage were detected in all patients treated with BX004 during dosing period, including, in several patients, up to Day 15 (one week after end of treatment)
- During the study period, no evidence of treatment-related phage resistance was observed in patients treated with BX004 compared to placebo
- As expected, likely due to short course of therapy, no effect on % predicted FEV1[2]



	BX004	Placebo
n	7	2
Mean (SD)	**-1.42 (1.03)**	**-0.28 (0.13)**
Max, Min	-3.27, -0.37	-0.37, -0.18

1. CFU– Colony forming units
2. FEV1 (or ppFEV1) – percent predicted forced expiratory volume in 1 second

Phase 1b/2a study Part 2 – Study design

Phase 1b/2a – Part 2 (n=34)

Objectives

- Safety and efficacy

Endpoints

- Primary endpoint - Safety and tolerability
- Decrease in *PsA* burden
- Sputum pharmacokinetics
- FEV1 (forced expiratory volume)
- CFQ-R (CF Questionnaire-Revised) and CRISS

Study Population

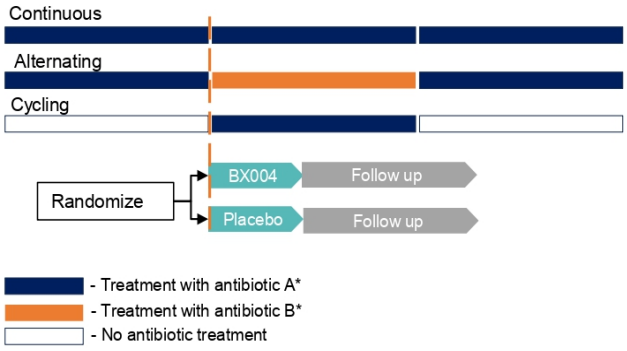
- CF patients with chronic *PsA* infection
- Physician choice of inhaled antibiotic regimen (continuous or alternating or cycling) on tobramycin, aztreonam or colistin
- No restriction on CFTR modulators

34 subjects

- 23 received nebulized BX004 phage therapy
- 11 received nebulized placebo
- 10 days duration of treatment

Ongoing safety follow-up

Treatment aligned with antibiotic standard of care



*Tobramycin or Aztreonam or Colistin

Study design informed by input from the CF Foundation

BiomX

Phase 1b/2a study Part 2 – Highlights

- Study drug was well-tolerated, no related SAE[1]s or related APE[1]s to study drug were observed
- BX004 showed clinically meaningful improvement in pulmonary function vs. placebo: Relative FEV1[2] improvement (5.67%) and CF Questionnaire-Revised respiratory[2] (8.87 points) at Day 17 (1 week after EOT[2]) in subgroup of patients with reduced lung function[3]
- In the BX004 arm, 3 out of 21 (14.3%) patients converted to sputum culture negative for *P. aeruginosa* after 10 days of treatment compared to 0 out of 10 (0%) in the placebo arm[4]
- In full population, BX004 vs. placebo *P. aeruginosa* levels were more variable. In a prespecified subgroup of patients on SOC[2] inhaled antibiotics on continuous regimen, BX004 vs. placebo showed bacterial reduction of 2.8 $\log_{10}$ CFU/g at EOT[2], exceeding Part 1 results
- Alternating/cycling background antibiotic regimen likely associated with fluctuations in *P. aeruginosa* levels potentially confounding the ability to observe a *P. aeruginosa* reduction in this subgroup
- During the study period, based on current available data, no evidence of treatment-related phage resistance was observed in patients treated with BX004 compared to placebo
- Plans to advance the BX004 program to a larger, pivotal Phase 2b/3 trial, subject to regulatory feedback and availability of sufficient funding

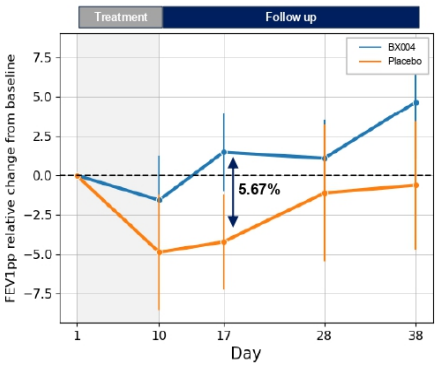
We believe this better-than-expected clinical effect in a short treatment duration de-risks planned pivotal P2b/3

1. SAE – Serious Adverse Event, APE – Acute Pulmonary Exacerbation
2. FEV1 (or ppFEV1) – percent predicted forced expiratory volume in 1 second, CF Questionnaire-Revised Respiratory – a PRO (Patient reported outcome) for respiratory parameters in CF aptients, EOT – End of treatment, SOC – standard of care
3. Predefined group with Baseline FEV1<70%
4. In patients that had quantitative CFU levels at study baseline

BX004 shows meaningful clinical improvement after 10 days of treatment in multiple clinical readouts both objective & patient reported outcome

- Clinical readouts in patients with reduced baseline lung function (predefined group, ppFEV1 of <70%)

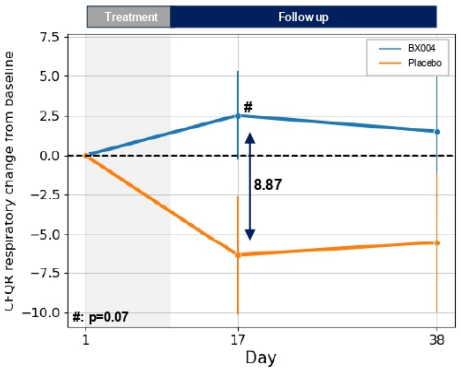
ppFEV1



ppFEV1 change from Baseline: Mean(SE)

	BX004 (N=12)[2]	Placebo (N=8)[2]	Difference
D10	-1.57 (2.64)	-4.86 (3.39)	3.29
D17	1.46 (2.33)	-4.21 (2.78)	5.67
D28	1.07 (2.32)	-1.12 (3.96)	2.19
D38	4.68 (3.28)	-0.62 (3.65)	5.3

CFQR[1] (respiratory)



CFQR respiratory change from Baseline: Mean(SE)

	BX004 (N=12)[3]	Placebo (N=8)[3]	Difference
D17	2.52 (2.61)	-6.35 (3.45)	8.87
D38	1.51 (5.1)	-5.56 (4.05)	7.07

1. PRO (Patient reported outcome) - CF Questionnaire-Revised for respiratory parameter
2. 2. BX004: D38 N=7, Placebo: D28 N=7, D38 N=6
3. 3. BX004: D17 and D38 N=11, Placebo: D17 and D38 N=7

BiomX

BX004 showed greater conversion (bacterial culture turned negative) in treatment over placebo

- In the BX004 arm 3 out of 21 (14.3%) patients converted to sputum culture negative for *P. aeruginosa* after 10 days of treatment (2 already after 4 days)[2]

Patient	Duration of PsA infection (years)	Baseline *PsA*[1] in sputum (CFU/g)
1	**18**	**$2.40x10^3$**
2	**13**	**$5.60x10^7$**
3*	**35**	**$1.09x10^7$**

*Subject had negative sputum culture for *P. aeruginosa* at D4, D10, D28, D38, and at most recent standard of care clinic visit (D63)

- In the placebo arm 0 out of 10 (0%)[2]

- In addition, in Part 1 of the study, one subject in the BX004 arm (1/7: 14.3%) who was persistently positive for *P. aeruginosa* for at least 13 years had a 3.3 log reduction at D15 later converted to sputum negative

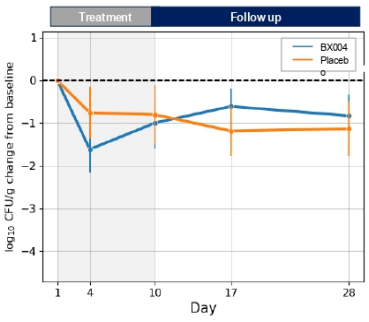
1. PsA – Pseudomonas aeruginosa, CFU/g – Colony forming units per gram
2. In patients that had quantitative CFU levels at study baseline

In a prespecified subgroup on continuous antibiotic standard of care, BX004 vs. placebo showed bacterial reduction of 2.8 log at end of treatment

- Reduction of *P. aeruginosa* assessed on all patients and those on continuous standard of care inhaled antibiotic regimen

***PsA* Bacterial reduction (CFU/g)[1]**

All study population



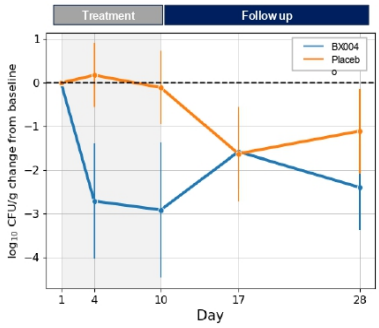
In full population, BX004 vs. placebo bacterial levels were variable

CFU/g log change from Baseline: Mean (SE)

	BX004 (N=21)[2]	Placebo (N=10)[2]	Difference
D4	-1.61 (0.51)	-0.75 (0.55)	-0.86
D10	-1.0 (0.57)	-0.8 (0.64)	-0.2
D17	-0.61 (0.4)	-1.18 (0.54)	0.57
D28	-0.83 (0.47)	-1.13 (0.59)	0.3

***PsA* Bacterial reduction (CFU/g)[1]**

Continuous antibiotic SOC[1]



Prespecified subgroup on continuous antibiotic SOC showed bacterial reductions which exceeded Part 1 results

CFU/g log change from Baseline: Mean (SE)

	BX004 (N=7)[3]	Placebo (N=5)	Difference
D4	-2.71 (1.21)	0.18 (0.64)	-2.89
D10	-2.91 (1.4)	-0.11 (0.73)	-2.8
D17	-1.58 (0.77)	-1.63 (0.95)	0.05
D28	-2.4 (0.9)	-1.1 (0.85)	-1.3

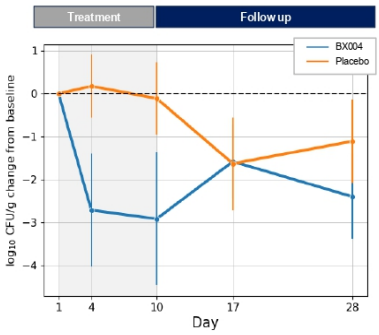
1. PsA – Pseudomonas aeruginosa, CFU/g – Colony forming units per gram , SOC – Standard of care
2. BX004: D10 N=20, Placebo: D4 and D10 N=9
3. BX004: D10 N=6

BiomX

Alternating/cycling standard of care antibiotic regimen likely associated with fluctuations in *P. aeruginosa* levels

- Reduction of *P. aeruginosa* assessed on all patients and those on continuous standard of care inhaled antibiotic regimen

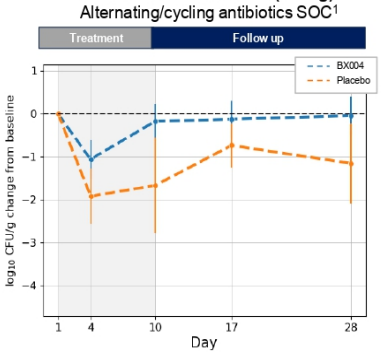
***PsA* Bacterial reduction (CFU/g)[1]**
Continuous antibiotics SOC[1]



CFU/g log change from Baseline: Mean (SE)

	BX004 (N=7)[2]	Placebo (N=5)	Difference
D4	-2.71 (1.21)	0.18 (0.64)	-2.89
D10	-2.91 (1.4)	-0.11 (0.73)	-2.8
D17	-1.58 (0.77)	-1.63 (0.95)	0.05
D28	-2.4 (0.9)	-1.1 (0.85)	-1.3

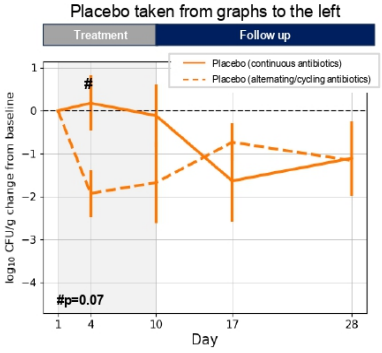
***PsA* Bacterial reduction (CFU/g)[1]**
Alternating/cycling antibiotics SOC[1]



CFU/g log change from Baseline: Mean (SE)

	BX004 (N=14)	Placebo (N=5)[3]	Difference
D4	-1.06 (0.41)	-1.92 (0.55)	0.86
D10	-0.17 (0.37)	-1.67 (0.95)	1.5
D17	-0.12 (0.4)	-0.73 (0.44)	0.61
D28	-0.04 (0.41)	-1.16 (0.82)	1.12

***PsA* Bacterial reduction (CFU/g)[1]**
Placebo taken from graphs to the left



Timing of alternating/cycling antibiotic regimen is potentially confounding the ability to observe a CFU reduction caused by BX004

1. PsA – Pseudomonas aeruginosa, CFU/g – Colony forming units per gram, SOC – Standard of care
2. BX004: D10 N=6
3. Placebo: D4 and D10 N=4

BiomX

BX004 provides significant commercial opportunity, potentially commanding a market > $1 billion

	BX004	References/Comments
Patient population (US)	~8,000	Number of CF patients with chronic PsA infections[1]
Potential effect on *PsA* CFU in lungs	Suppression/eradication of *PsA* (CFU in sputum)	Magnitude observed under Tobramycin Phase 3 study was ~1.5-2 log[2]
Potential impact on lungs	Improved lung function (FEV1)	Magnitude observed under Tobramycin Phase 3 study was 8-12%[2]
Potential pricing in the US	$100K - $120K annually per patient	Benchmarks (cost annually per patient): Trikafta: $300K, alternating antibiotics treatment, Tobi Podhaler and Cayston solution: $80K, Arikayce for MAC: $100-120K[3]
Market potential	**~$1 Billion in the US alone** (worldwide $1.6 billion)[4]	US patient population times potential pricing

1. CFF 2019 Patient Registry Annual Data Report
2. See slide 9 on Tobramycin study
3. Trikafta and Arikayce – Publicly announced pricing, First Databank, Jan. 8, 2021, public pricing information. for alternating Tobi Podhaler and Cayston solution assumes 65% compliance
4. Assumes rest of the world outside US comprises 40% of total market (Vertex annual report, publicly available pricing for Vertex drugs)

IP protection of phage cocktails

CORE IP APPLICATIONS:

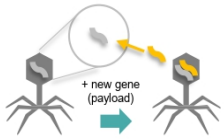
Natural phage cocktails

- Composition claims on combinations of phage in cocktail/s based on additive/synergistic effects (e.g. combinations of phage avoiding development of resistance due to multiple MOAs)
- Method claims for use of the combinations against the infecting bacteria

Novel combination of natural phage

Synthetic phage cocktails

- Composition claims on new synthetic matter on each specific synthetic phage and the phage combination of the cocktail (e.g. a synthetic phage where a heterologous gene was added conferring traits, such as improved biofilm breakdown capabilities)



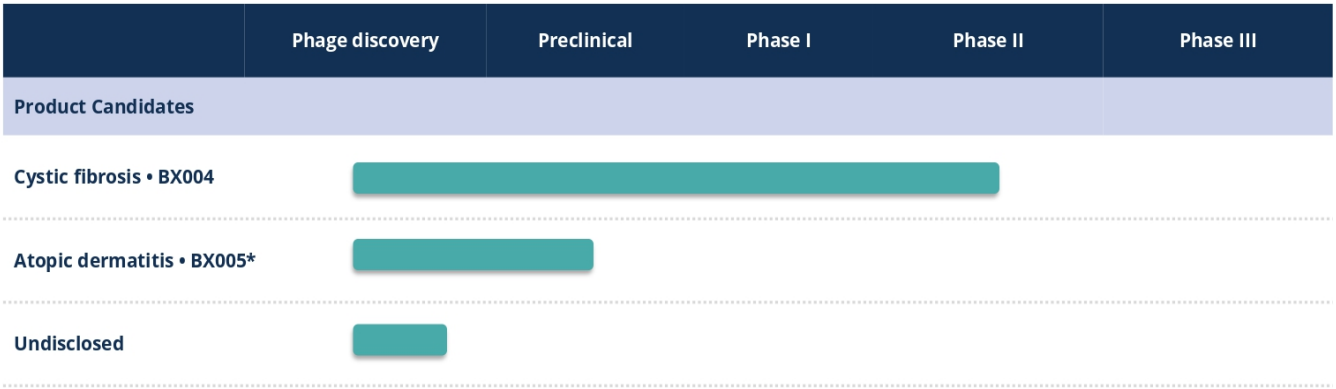
Synthetically engineered phage

SUPPLEMENT IP APPLICATIONS:

- Claim product aspects invented in later product development such as effective formulations, delivery device features, manufacturing methods, synthetic engineering of manufacturing host or other

PIPELINE

Pipeline



* On May 24, 2022, we announced that we plan to prioritize the CF program and delay the AD program.

Thank you

BiomX