

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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): March 25, 2021

Aquestive Therapeutics, Inc.
(Exact name of Registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of Incorporation or
Organization)

001-38599
(Commission File Number)

82-3827296
(I.R.S. Employer Identification No.)

30 Technology Drive
Warren, NJ 07059
(908) 941-1900
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Not Applicable
(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
Common Stock, par value \$0.001 per share	AQST	Nasdaq Global Market

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.

Aquestive Therapeutics, Inc. (the “Company”) is furnishing this Current Report on Form 8-K in connection with the disclosure of information, in the form of an investor presentation, to be given at meetings with institutional investors, analysts and others (the “R&D Event”). This information may be amended or updated at any time and from time to time through another Current Report on Form 8-K, a later company filing or other means. A copy of the Company’s investor presentation is attached hereto as Exhibit 99.1 to this Current Report on Form 8-K and incorporated into this Item 7.01 by reference and replaces in its entirety all prior investor presentations filed by the Company. The investor presentation is available on the Company’s website located at www.aquestive.com, although the Company reserves the right to discontinue that availability at any time.

The information in this Item 7.01 (including Exhibit 99.1) shall not be deemed to be “filed” for purposes of, or otherwise subject to the liabilities of, Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), nor shall it be deemed to be incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in any such filing.

Item 8.01 Other Events.

On March 25, 2021, the Company issued a press release providing a business update in connection with the R&D Event being hosted by the Company. A copy of the Company’s press release is attached hereto as Exhibit 99.2 and incorporated into this Item 8.01 by reference.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits.

<u>Exhibit Number</u>	<u>Description</u>
99.1	Investor presentation.
99.2	Press Release dated March 25, 2021.

SIGNATURE

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

Dated: March 25, 2021

Aquestive Therapeutics, Inc.

By: /s/ A. Ernest Toth, Jr.

Name: A. Ernest Toth, Jr.

Title: Interim Chief Financial Officer



Anaphylaxis and Epinephrine **R&D Day**

March 25, 2021

Advancing medicines.
Solving problems.
Improving lives.

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Forward Looking Statement

This presentation includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "believe," "anticipate," "plan," "expect," "estimate," "intend," "may," "will," or the negative of those terms, and similar expressions, are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements regarding the advancement of Libervant, AQST-108, AQST-109 and other product candidates through the regulatory and development pipeline; and business strategies, market opportunities, and other statements that are not historical facts. These forward-looking statements are subject to the uncertain impact of the COVID-19 global pandemic on our business including with respect to our clinical trials including site initiation, patient enrollment and timing and adequacy of clinical trials; on regulatory submissions and regulatory reviews and approvals of our product candidates; pharmaceutical ingredient and other raw materials supply chain, manufacture, and distribution; sale of and demand for our products; our liquidity and availability of capital resources; customer demand for our products and services; customers' ability to pay for goods and services; and ongoing availability of an appropriate labor force and skilled professionals. Given these uncertainties, the Company is unable to provide assurance that operations can be maintained as planned prior to the COVID-19 pandemic.

These forward-looking statements are based on our current expectations and beliefs and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Such risks and uncertainties include, but are not limited to, risks associated with the Company's development work, including any delays or changes to the timing, cost and success of our product development activities and clinical trials and plans for AQST-108, AQST-109 and our other drug candidates; risk of delays in FDA approval of our drug candidates, Libervant and AQST-108, AQST-109, and our other drug candidates or failure to receive approval; ability to address the concerns identified in the FDA's Complete Response Letter dated September 25, 2020 regarding the New Drug Application for Libervant; risk of our ability to demonstrate to the FDA "clinical superiority" within the meaning of the FDA regulations of Libervant relative to FDA-approved diazepam rectal gel and nasal spray products including by establishing a major contribution to patient care within the meaning of FDA regulations relative to the approved products as well as risks related to other potential pathways or positions which are or may in the future be advanced to the FDA to overcome the seven year orphan drug exclusivity granted by the FDA for the approved nasal spray product of a competitor in the U.S. and there can be no assurance that we will be successful; risk that a competitor obtains FDA orphan drug exclusivity for a product with the same active moiety as any of our other drug products for which we are seeking FDA approval and that such earlier approved competitor orphan drug blocks such other product candidates in the U.S. for seven years for the same indication; risk inherent in commercializing a new product (including technology risks, financial risks, market risks and implementation risks and regulatory limitations); risk of development of our sales and marketing capabilities; risk of legal costs associated with and the outcome of our patent litigation challenging third party at risk generic sale of our proprietary products; risk of sufficient capital and cash resources, including access to available debt and equity financing and revenues from operations, to satisfy all of our short-term and longer term cash requirements and other cash needs, at the times and in the amounts needed; risk of failure to satisfy all financial and other debt covenants and of any default; our and our competitors' orphan drug approval and resulting drug exclusivity for our products or products of our competitors; short-term and long-term liquidity and cash requirements, cash funding and cash burn; risk related to government claims against Indivior for which we license, manufacture and sell Suboxone® and which accounts for the substantial part of our current operating revenues; risks related to the outsourcing of certain marketing and other operational and staff functions to third parties; risk of the rate and degree of market acceptance of our product and product candidates; the success of any competing products, including generics; risk of the size and growth of our product markets; risks of compliance with all FDA and other governmental and customer requirements for our manufacturing facilities; risks associated with intellectual property rights and infringement claims relating to the Company's products; risk of unexpected patent developments; the impact of existing and future legislation and regulatory provisions on product exclusivity, legislation or regulatory actions affecting pharmaceutical product pricing, reimbursement or access; claims and risks that may arise regarding the safety or efficacy of the Company's products and product candidates; risk of loss of significant customers; risks related to legal proceedings, including patent infringement, investigative and antitrust litigation matters; changes in government laws and regulations; risk of product recalls and withdrawals; uncertainties related to general economic, political, business, industry, regulatory and market conditions and other unusual items; and other uncertainties affecting the Company described in the "Risk Factors" section and in other sections included in our Annual Report on Form 10-K, in our Quarterly Reports on Form 10-Q, and in our Current Reports on Form 8-K filed with the Securities Exchange Commission (SEC). Given these uncertainties, you should not place undue reliance on these forward-looking statements, which speak only as of the date made. All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by this cautionary statement. The Company assumes no obligation to update forward-looking statements or outlook or guidance after the date of this press release whether as a result of new information, future events or otherwise, except as may be required by applicable law.

PharmFilm® and the Aquestive logo are registered trademarks of Aquestive Therapeutics, Inc. All other registered trademarks referenced herein are the property of their respective owners.

This presentation shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

Topic	Presenter(s)
Introductions	Keith Kendall, CEO Dan Barber, COO
Medical Overview of Anaphylaxis and Epinephrine	David M. Fleischer, MD, FAAAAI <i>Professor of Pediatrics, Section Head, Allergy and Immunology, Children's Hospital Colorado University of Colorado Denver School of Medicine</i>
Anaphylaxis Market Overview	Michael Arcara, MBA <i>Commercial Lead, Allergy</i>
R&D Overview of AQST-108 and AQST-109	Steve Wargacki, PhD <i>VP of R&D, Aquestive Therapeutics</i>
Clinical Lessons from Today's Products	John Oppenheimer, MD <i>Clinical Professor of Medicine at UMDNJ Rutgers, Pulmonary and Allergy Associates NJ</i>
Clinical Overview of AQST-108 and AQST-109	Mark Lepore, MD <i>Chief Medical Officer, Allergy, Aquestive Therapeutics</i>
Q&A	
Closing Remarks	Keith Kendall, CEO

PharmFilm® Technology – Where You Need It, When You Need It™
And Needle Free



Anaphylaxis and Epinephrine **Medical Overview**

David M. Fleischer, MD, FAAAAI

Professor of Pediatrics

Section Head, Allergy and Immunology

Children's Hospital Colorado

University of Colorado Denver School of Medicine

Advancing medicines.
Solving problems.
Improving lives.



David M. Fleischer, MD, FAAAAI

Professor of Pediatrics

Section Head, Allergy and Immunology

Children's Hospital Colorado

University of Colorado Denver School of Medicine

Anaphylaxis is a severe systemic allergic reaction that is rapid in onset and can cause death

Poses serious consequences for at-risk patients

Often occurs in the community setting

Patients at risk for anaphylaxis should have a long-term allergy-management plan

Simons FE. *J Allergy Clin Immunol*. 2009;124(4):625-636.

7 Property of Aquestive Therapeutics, Inc. Do not distribute.

Common Triggers of Anaphylaxis



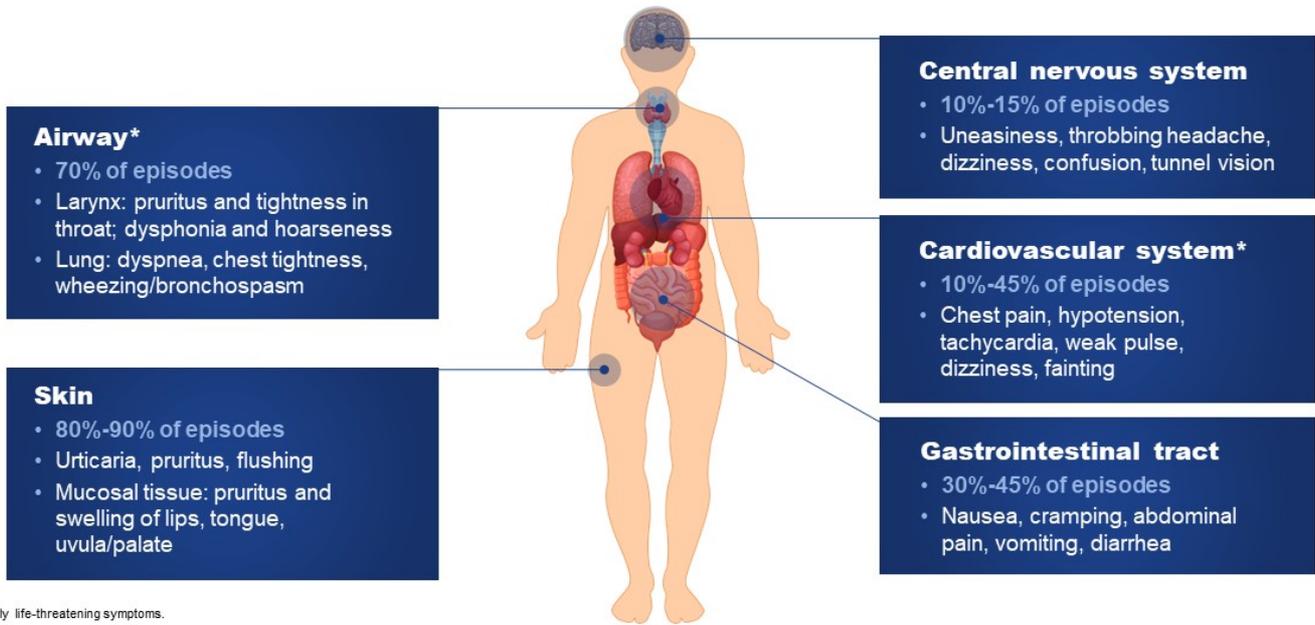
Insect venom, medications, and latex

Exercise

Idiopathic anaphylaxis

The infographic is set against a dark blue background. On the left, under the heading 'Insect venom, medications, and latex', there are four categories: a shrimp, a pair of white latex gloves, a peanut, and a pile of various pills. In the center is a large image of a wasp. On the right, under the heading 'Exercise', is an image of a woman running. Below the running woman is a faint, dotted outline of a human head profile. The heading 'Idiopathic anaphylaxis' is positioned below the head profile.

Common Signs and Symptoms of Anaphylaxis



*Potentially life-threatening symptoms.

Simons FE. *J Allergy Clin Immunol*. 2009;124(4):625-636.

Patterns of Anaphylaxis

- **Uniphasic**

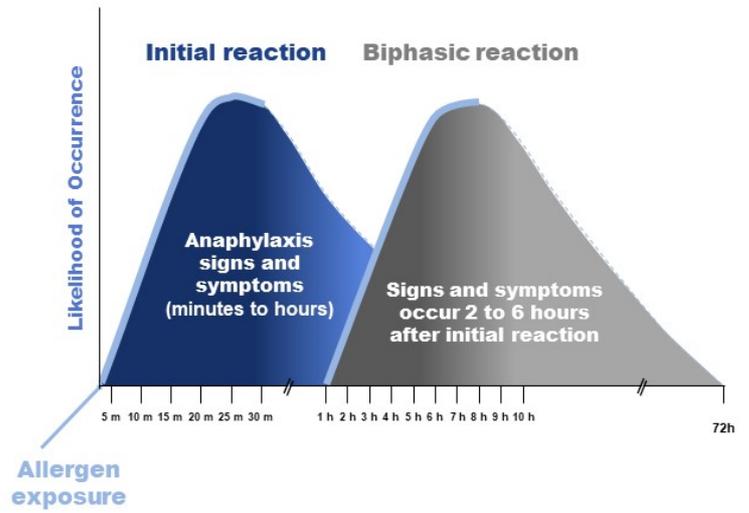
- Signs and symptoms within minutes of exposure to an offending stimulus

- **Biphasic**

- Biphasic anaphylaxis has an immediate phase with a period of improvement and response to initial therapy, but with recurrent symptoms 2 to 6 hours after the onset of the initial reaction

- **Protracted**

- Protracted anaphylaxis causes prolonged manifestations (usually respiratory distress or hypotensive shock) for 5 to 32 hours



Golden D. *Novartis Found Symp.* 2004;257:101-110.

- Epinephrine is first-line treatment for anaphylaxis¹
- Fatality due to anaphylaxis is associated with delayed epinephrine administration²
 - Failure to administer epinephrine in a timely manner (eg, pre-ED) has been associated with fatalities³
- Failure to administer epinephrine promptly is the most important factor contributing to death



ED, emergency department.

1. Waserman S et al. *J Allergy Clin Immunol Pract.* 2017;5:1180-1191; 2. Song TT, Lieberman P. *Curr Opin Allergy Clin Immunol.* 2015;15(4):323-328; 3. Simons FE et al. *J Allergy Clin Immunol.* 1998;101:33-37.

Use and Carry Practices for Epinephrine Auto-Injectors

- **Correct use of epinephrine auto-injectors (EAI) is surprisingly low**
 - Data indicate just 16% to 32%¹
- **Studies have shown that:**
 - Just half of at-risk patients regularly carry an unexpired EAI²
 - Many patients did not have epinephrine available at the time of a reaction³
 - A majority of caregivers did not give their allergic children epinephrine at the time of their most severe allergic reactions⁴
- **Most common reasons for pitfalls in the use of EAI are:**
 - Lack of auto-injector availability
 - Inadequate education on how to administer the epinephrine
 - Concern for systemic effects, failure to administer correctly, and accidental administration⁵



1. 1. Bonds RS et al. Misuse of medical devices. *Ann Allergy Asthma Immunol.* 2015;114(1):74e76. e2; 2. Arkwright PD, Farragher AJ. *Pediatr Allergy Immunol.* 2006;17(3):227e229; 3. Polloni L et al. *Pediatr Allergy Immunol.* 2020;31(4):380e387; 4. Egan M et al. *J Allergy Clin Immunol Pract.* 2019;7(2):655e658; 5. Warren CM et al. *Ann Allergy Asthma Immunol.* 2018;121(4):479e489. e2. Images: EpiPen Package Insert, Patient Directions for Use

Adverse Events Due to Incorrect Use of EAls



- Publications have raised concerns over laceration and embedded-needle injuries resulting from the use of EAls¹
- From 1994 to 2007, >15,000 unintentional injections from EAls were reported to US Poison Control Centers
 - Those unintentionally injected had a median age of 14 years²
- Even if EAls are available, safety concerns and/or fear of needles may prevent them from being administered in a timely manner¹

1. Posner L, Camargo CA Jr. *Drug Health Patient Saf.* 2017;9:9-18; 2. Simons FER et al. *J Allergy Clin Immunol.* 2010;125(2):419-423.e4. 3. Image: Brown J et al. Lacerations and Embedded Needles Caused by EAl Use in Children. *Annals of Emergency Medicine.* 2015.

EAI Refill Rates Are Suboptimal



- Lack of annual EAI refills can leave at-risk patients without immediate access to epinephrine when they need it
- In 1 large HMO over a 5-year period:
 - A total of just 46% of patients refilled their EAI at least once
 - Just 25% refilled multiple times
 - Only 11% refilled each year

Kaplan. *Curr Allergy Asthma Rep.* 2011;11:65-70.

- Anaphylaxis is an unpredictable, severe systemic allergic reaction that is rapid in onset and potentially fatal
- At-risk patients should always have immediate access to 2 doses of epinephrine
- Fatality due to anaphylaxis is associated with delayed epinephrine administration
- Far too few at-risk patients:
 - Carry their EAI with them
 - Refill their EAI on an ongoing basis
 - Are confident, timely, and accurate in their use of an EAI during an emergency situation
- Epinephrine products that are easier for patients to carry and administer would be an important addition to an allergist's treatment armamentarium



Anaphylaxis and Epinephrine
Market Overview

Michael Arcara

Advancing medicines.
Solving problems.
Improving lives.

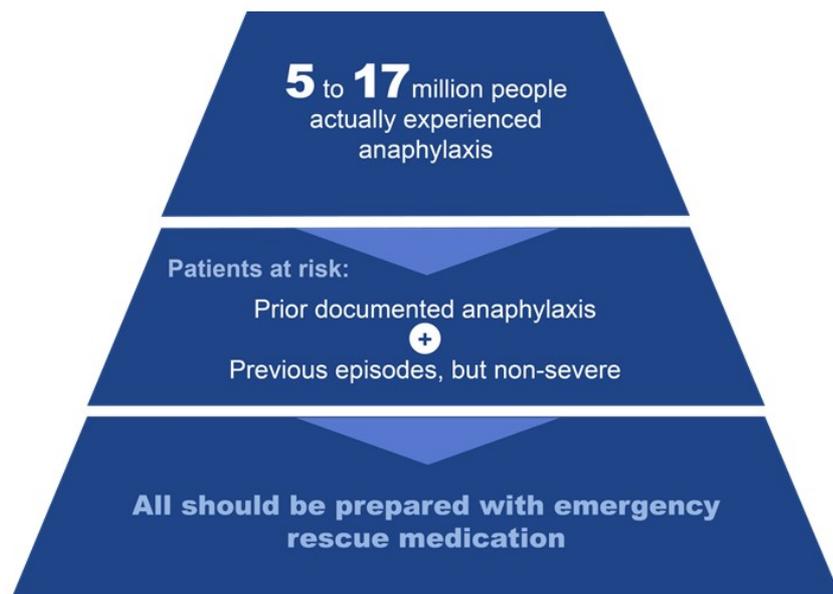


Michael Arcara
Commercial Lead, Allergy

- MBA, University of Michigan
- 25 years experience in pharmaceutical commercial development
- Epinephrine-specific experience: Mylan (EpiPen); Valeant (Emerade)

Epidemiology: Life-Threatening Allergic Reaction^{1,2}

- Anaphylaxis epidemiology is not well defined
- Studies estimate that 1.6% to 5.1% of the US population has actually had an anaphylaxis episode
- One set of data indicates that people dying from food allergy often had previous reactions but these were typically not severe³
- Per CDC: the prevalence of food allergies in children increased by 50% between 1997 and 2011



1. Woods et al. *J Allergy Clin Immunol*. 2014;133:461-467; 2. Food Allergy Research & Education website. <https://www.foodallergy.org/resources/facts-and-statistics>; 3. Pumphrey R. Anaphylaxis: can we tell who is at risk of a fatal reaction? *Curr Opin Allergy Immunol*. 2004.

Overview: Epinephrine Market

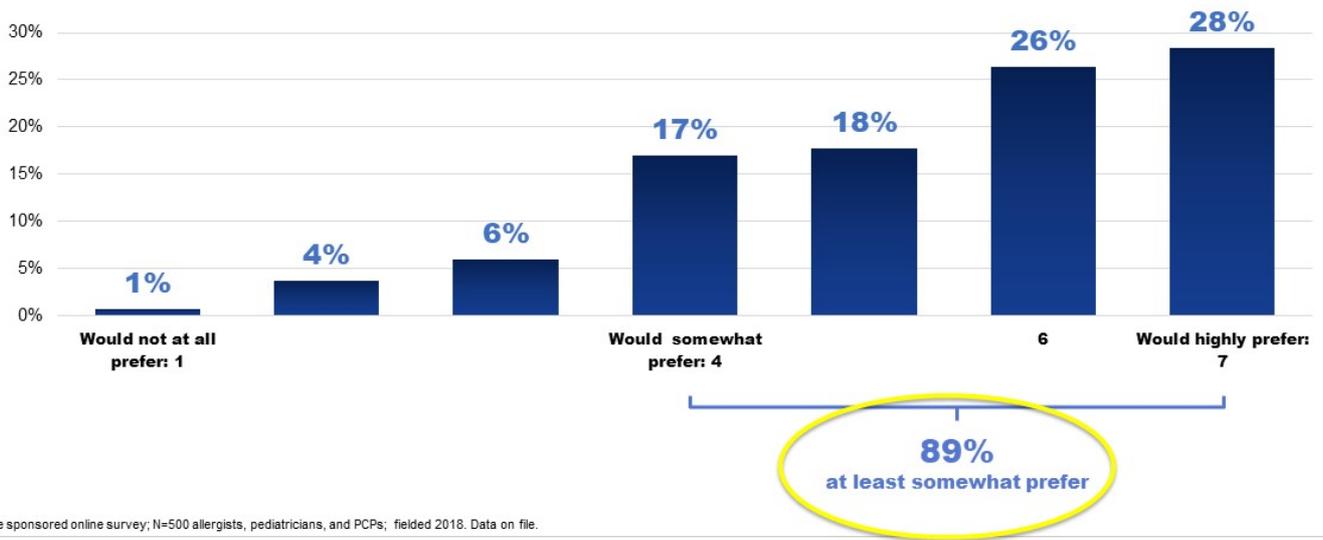
Epinephrine: US market	2014	2015	2016	2017	2018	2019	2020
Market prescriptions, millions	3.6	3.8	3.8	3.6	3.1	3.2	3.0
Market \$, billions	1.4	1.9	2.4	2.1	1.8	1.9	1.5

- Prescription market was still growing and peaked just before Teva generic entered
- 2018-current = significantly diminished HCP/consumer promotion
 - Large percentage of EAI prescriptions—especially first-time prescriptions—are driven by allergists and pediatricians
 - Target HCP universe ~20,000 physicians
- Current EpiPen® 2-Pak WAC: ~\$300

Source: Symphony Health PHAST (Pharmaceutical Audit Suite)

Physician Research: Providers Indicate Preference for Alternative Route of Administration

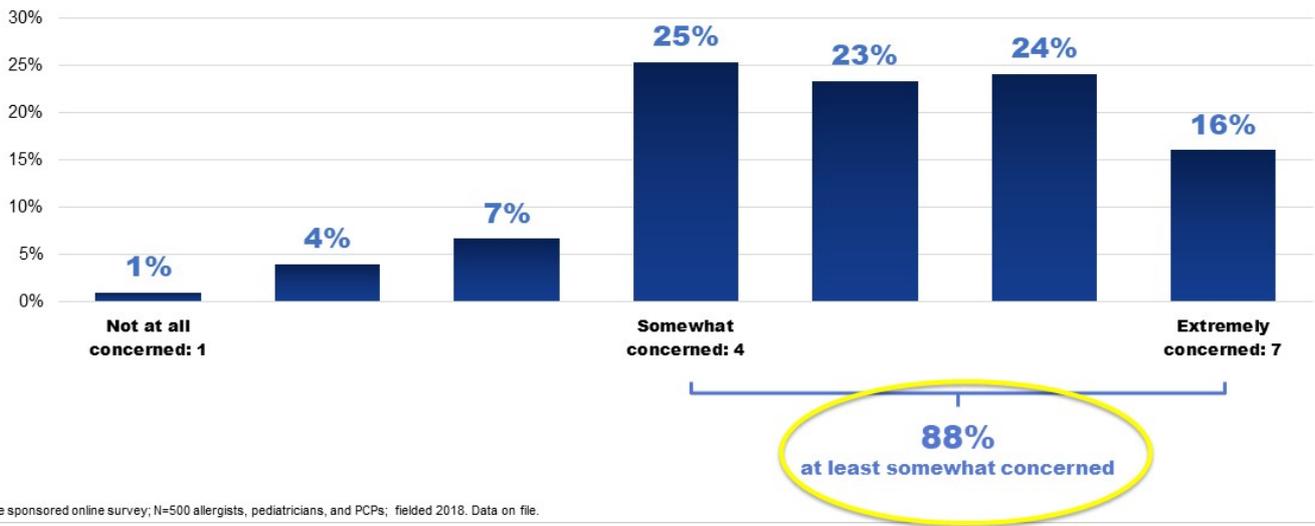
To what extent would you prefer an alternative administration route for epinephrine?



*Aquestive sponsored online survey; N=500 allergists, pediatricians, and PCPs; fielded 2018. Data on file.

Physician Research: Concerns About Patients Having EAI With Them at All Times

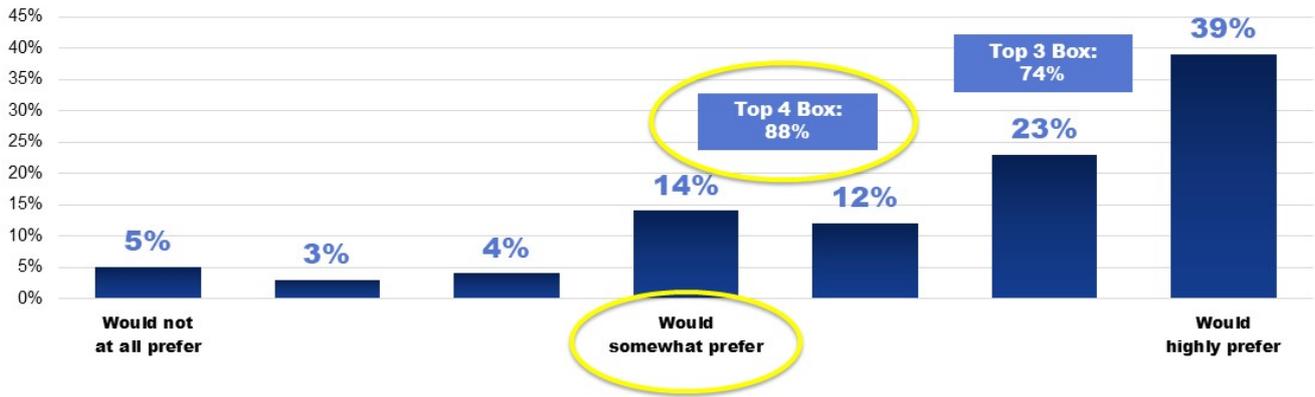
How concerned are you with patients and/or their caregivers consistently having their auto-injector(s) with them when they leave home?



*Aquestive sponsored online survey; N=500 allergists, pediatricians, and PCPs; fielded 2018. Data on file.

Patient Survey: Unprompted Unmet Need

To what extent would you prefer a new way to dose epinephrine?



*Aquestive sponsored online, 5-minute survey; N=75 EAI patients, 75 caregivers; fielded February 2021. Data on file

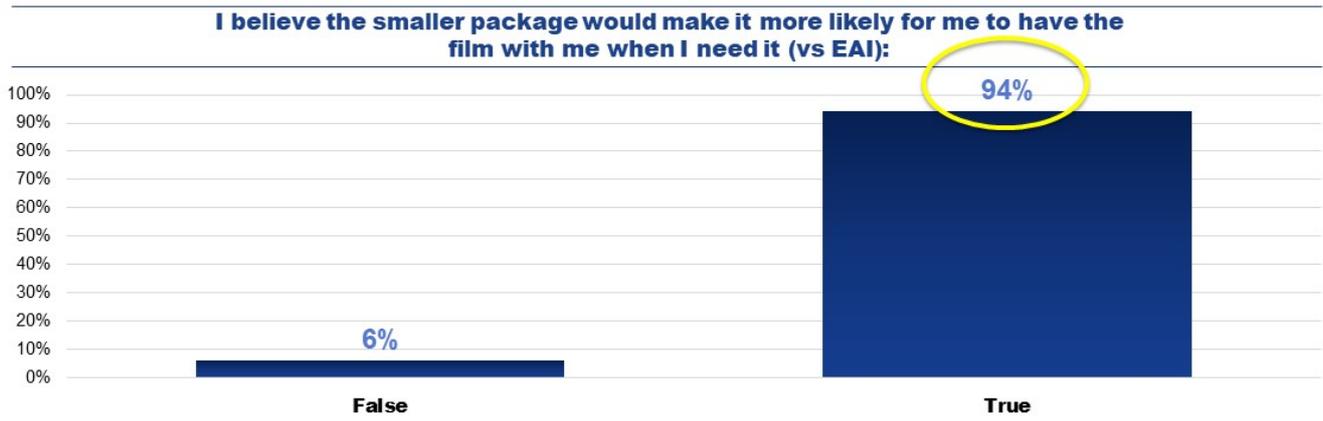
Patient Survey: First Exposure to Film Dosing

Interest in the film medicine being available to replace your EAI



*Aquestive sponsored online, 5-minute survey; N=75 EAI patients, 75 caregivers; fielded February 2021. Data on file

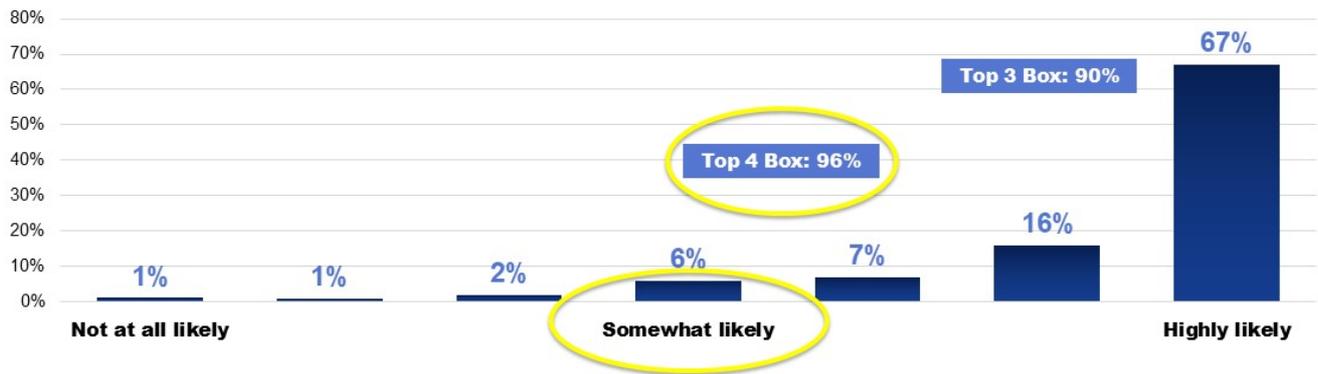
Patient Survey: Impact, Epinephrine On Hand



*Aquestive sponsored online, 5-minute survey; N=75 EAI patients, 75 caregivers; fielded February 2021. Data on file

Patient Survey: Ask Doctor About Film

How likely would you be to ask your doctor about the film?



*Aquestive sponsored online, 5-minute survey; N=75 EAI patients, 75 caregivers; fielded February 2021. Data on file

Our View of the Epinephrine Commercial Opportunity

PharmFilm delivers market share within existing market

Aquestive allergy franchise delivers market expansion

Features/benefits customers are looking for in a new epinephrine delivery:

- Portability
- Usability
- Needle free
- Temperature tolerability*
- Waterproof/resistant*

Patient convenience
+
Medical advance

Expected opportunities to increase the customer base:

- Previously reluctant (e.g., needle-phobic or size-resistant) patients more readily adopt PharmFilm dosing
- Increased carry rates due to size, in turn, increase engagement with the brand and annual refill rates
- Given current lack of promotion in the market, Aquestive launch plans to re-engage HCPs, patients, and advocacy groups

*Target Product Profile

Aquestive PharmFilm – Potential Annual Peak Net Sales*



*Potential sales revenues are based on current sales information from Symphony Health PHAST (Pharmaceutical Audit Suite) (See Slide 19) assuming peak sales at ~5 years post launch.

Summary: Anaphylaxis and Epinephrine

1. A large and growing patient population at risk for anaphylaxis exists
2. PharmFilm, as a dosage form, has the potential to deliver on physician- and patient-articulated unmet needs in the marketplace: smaller size and needle free
3. Aquestive's PharmFilm technology represents an exciting and significant pipeline opportunity



Anaphylaxis and Epinephrine
Aquestive Epinephrine Program

Stephen Wargacki, Ph.D.
Vice President R&D

Advancing medicines.
Solving problems.
Improving lives.



Stephen Wargacki, PhD

Vice President, R&D

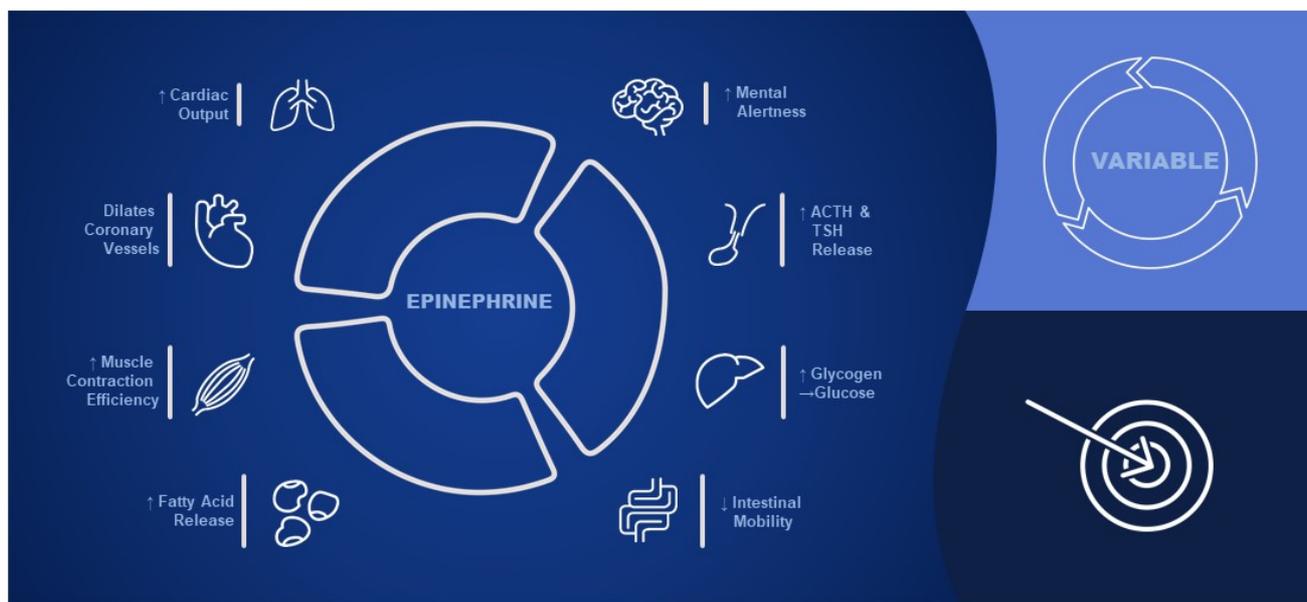
- **Joined Aquestive in 2015**
- PhD, Polymer Chemistry
University of Tennessee
- Postdoctoral Fellow
Air Force Research Laboratory
- 12 years experience in alternative drug delivery
- 24 publications (286 citations)
- 47 patents (18 patent families)



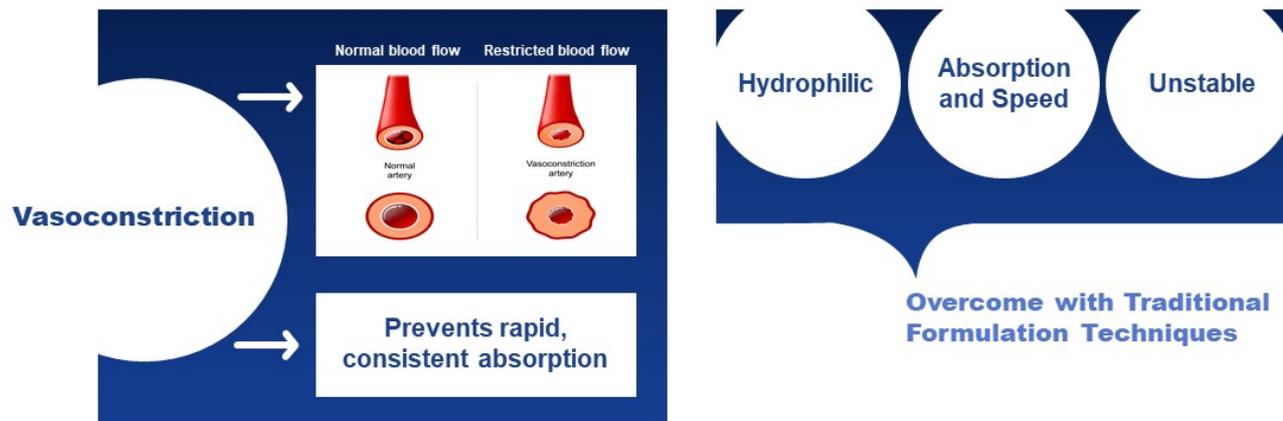
Exservan
(riluzole) oral film

Sympazan[®]
(clobazam) oral film
5 mg - 10 mg - 20 mg

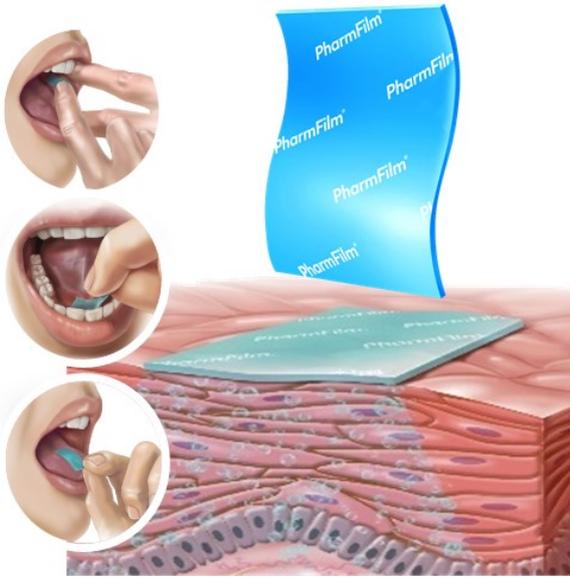
Challenges of Epinephrine for Anaphylaxis



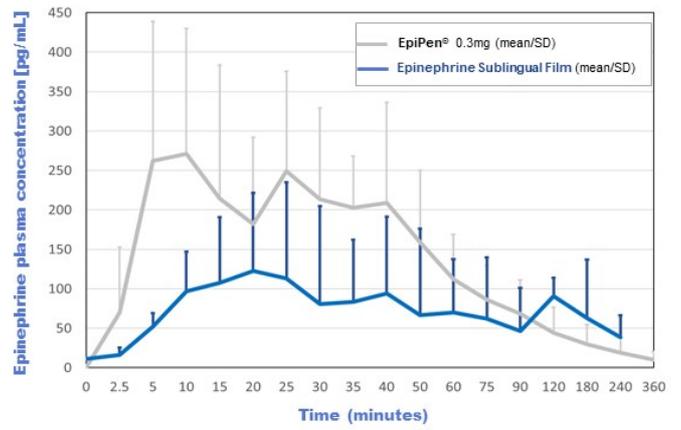
Why has science not overcome the challenges of alternative epinephrine delivery?



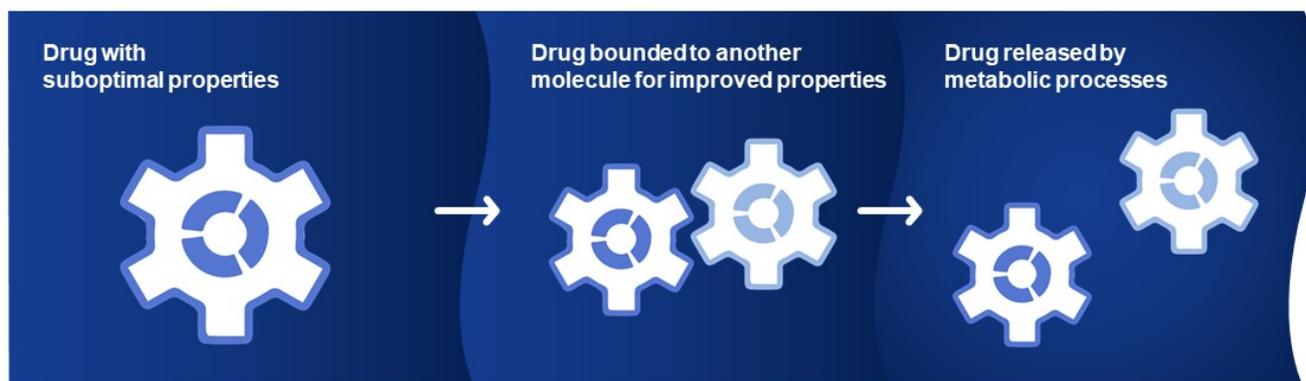
PharmFilm® for Delivery of Oral Epinephrine



Mean profiles for initial epinephrine film compared with EpiPen® in Study 160455



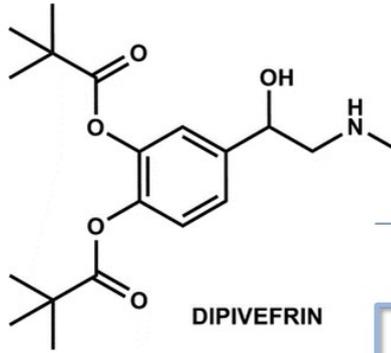
What are prodrugs*?



*Since 2015, prodrugs have accounted for ~10% of all small molecules that have come to market in the United States.

Reference: *European Journal of Pharmaceutical Sciences*, (109) 2017, pg 146

AQST-108: L-Dipivefrin



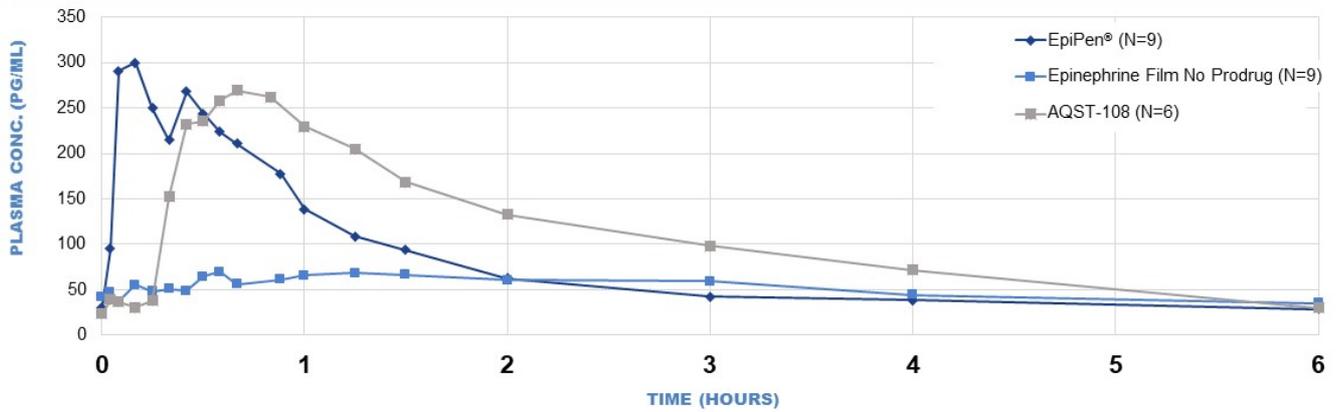
Property	Epinephrine	Dipivefrin
Log P	-0.43	3.71

Receptors	Epinephrine (μM)	Dipivefrin (μM)	Dipivefrin vs Epi (ratio)
α1 receptors	0.00018	0.41	2278

Impact of AQST-108 on Sublingual Delivery of Epinephrine

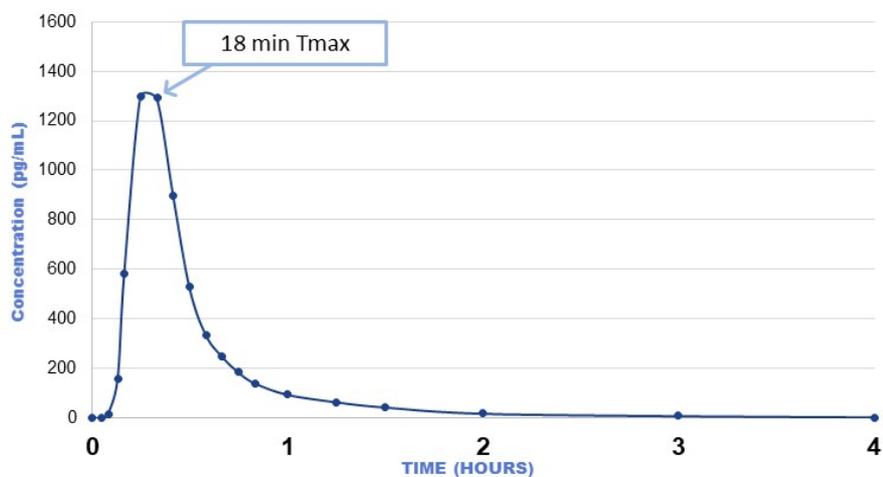
- Increased absorption at similar doses
- Comparable C_{max} , AUC to injectable from previous study

Average Epinephrine Plasma Profile From Prototypes Generations 1 and 2



Epinephrine Prodrug (AQST-108) Overcomes Vasoconstriction

AQST-108 Concentration vs. Time Study 200203



AQST-108 (Dipivefrin) sublingual film

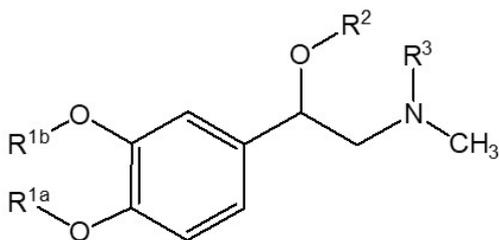
- Strong, consistent absorption
- Rapid T_{max}
 - **Requires faster conversion for improved epinephrine PK**

Aquestive's library of epinephrine prodrugs can control conversion rate

Potential to:

- Improve T_{max} epinephrine
- Reduce dosage
- Increase C_{max}

Introducing AQST-109: 2nd Generation Epinephrine Prodrug



In vitro data showing instant conversion of AQST-109

Half Life	AQST-108	AQST-109
Minipig	3.1	0.8
Dog	16.0	NC*
Human	10.3	NC*

*Too fast to calculate

MiniPig data show similar exposure at lower doses

Prototypes	Epinephrine Cmax (ng/mL) N=5
AQST-108 (24mg)	2.7
AQST-109 (6mg)	3.0

Attribute	Relative to AQST-108
Permeation Rate	Increased
Conversion Rate	Increased
Required Dose	Decreased
Tolerability	Increased

Patent Applications Extending into 2041

Innovation	Patent Status
Permeation enhancers that improve delivery of epinephrine, PK and PD	<ul style="list-style-type: none">• 1 US application• 8 Foreign applications• Priority date: May 5, 2016• Possible patent term to 2037
Permeation enhancers that improve delivery of dipivefrin and epinephrine, PK and PD	<ul style="list-style-type: none">• 2 US applications• 8 Foreign applications• Priority date: May 4, 2017• Possible patent term to 2037
Prodrugs of epinephrine and permeation enhancers, conversion rates, PK and PD	<ul style="list-style-type: none">• 2 US applications• 1 Foreign application• Priority date: late 2019• Possible patent term to 2041

Anaphylaxis and Epinephrine Clinical Lessons From Today's Injectable Products

John Oppenheimer, MD

Advancing medicines.
Solving problems.
Improving lives.



John Oppenheimer, M.D.

UMDNJ Rutgers University School of Medicine

Pulmonary & Allergy Associates

- Indirect and observational **evidence of effectiveness**¹
 - There are no randomized, placebo-controlled efficacy and safety studies in patients
 - Cochrane Collaboration confirmed this finding²

- PK and PD **comparability is important**
 - There is no ethical clinical model for anaphylaxis

PK, pharmacokinetic; PD, pharmacodynamic.

1. Lieberman P et al. *Ann Allergy Asthma Immunol*. 2015;115:341-384; 2. AAAAI online website. March 29, 2018. Accessed March 9, 2021. <https://www.aaaai.org/global/latest-research-summaries/New-Research-from-JACI-In-Practice/epinephrine>

Optimal Dose is Unknown¹

- No data to support the “correct dose”¹
- In adults, a higher dose was previously well accepted¹
- Dose-ranging and optimal dose selection for the FDA-approved EAI products²

EAI, epinephrine auto-injector; FDA, US Food and Drug Administration.

1. Lieberman P et al. *Ann Allergy Asthma Immunol*. 2015;115:341-384; 2. EpiPen. Prescribing information. Mylan Specialty LP; 2020;

Injected Epinephrine

PK and PD Considerations

- PK and PD data from epinephrine administered via injection are sparse
- Published studies suggest a wide variation in C_{max} and T_{max} ¹

Author, year	Device	Mean C_{max} (pg/mL)	Mean T_{max} (min)
Dworaczyk and Hunt, 2020 ¹	EpiPen 0.3 mg	308	16
Dworaczyk and Hunt, 2021 ²	EpiPen 0.3 mg	288	10
Worm M et al, 2020 ³	EpiPen 0.3 mg	520 ^{b,d}	9 ^c
	IM injection 0.3 mg	310 ^{a,b}	40 ^c
Duvauchelle T et al, 2018 ⁴	Anapen 0.3 mg	377	12 ^d
Breuer C et al, 2013 ⁵	Anapen 0.3 mg	484 ^b	13 ^d
Auvi-Q FDA Review ⁶	Auvi-Q 0.3 mg	486	20 ^d
Edwards et al 2013 ⁷	EpiPen 0.3 mg	520	10 ^d

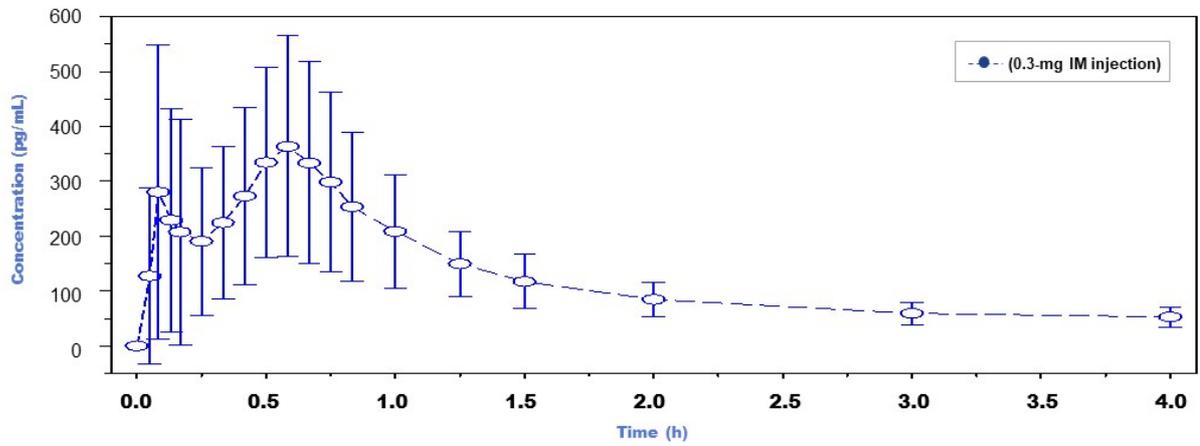
^aNanogram to picogram converted; ^buncorrected values; ^cmedian value; ^dconverted to minutes from hours.

IM, intramuscular.

1. Dworaczyk D, Hunt A. Presented at the American Academy of Allergy, Asthma and Immunology (AAAAI) National Conference, March 16, 2020. <https://brynpharma.com/media/content/docs/comparative-delivery-poster.pdf>,
 2. Dworaczyk D, Hunt J. *Allergy Clin Immunol Pract.* 2021;147(2):(2 suppl)AB241 Presented at the American Academy of Allergy, Asthma and Immunology (AAAAI) National Conference, March 16, 2020; Accessed March 2, 2021.
 3. Worm M et al. *Clin Transl Allergy.* 2020;10:21; 4. Duvauchelle T et al. *J Allergy Clin Immunol Pract.* 2018;6(4):1257-1263; 5. Breuer C et al. *Eur J Clin Pharmacol.* 2013;69:1303-1310; 6. US FDA. Epinephrine (Auvi-Q) clinical pharmacology and Biopharmaceutics review. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2012/201739Orig1s000ClinPharmR.pdf. Accessed on February 25, 2021; 7. Edwards ES et al. *Ann Allergy Asthma Immunol.* 2013;111(2):132-137.

Variability of Epinephrine Injected Into Muscle

Mean (\pm SD) baseline corrected epinephrine concentration over scheduled time by treatment, linear scale



Data on file from Study 200203 top line results.

Known Pharmacodynamic (PD) Markers for Epinephrine

Increase in heart rate

Increase in systolic blood pressure

Increase in diastolic blood pressure

Simons FE. *J Allergy Clin Immunol*. 2009;124(4):625-636.

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 **Aquestive**

C_{max} range

280 pg/mL–530 pg/mL

Median T_{max} range

<20 min

1. Dworaczyk D, Hunt A. Presented at the American Academy of Allergy, Asthma and Immunology (AAAAI) National Conference, March 16, 2020. <https://brynpharma.com/media/content/docs/comparative-delivery-poster.pdf>,
2. Dworaczyk D, Hunt J. *Allergy Clin Immunol Pract.* 2021;147(2):(2 suppl)AB241 Presented at the American Academy of Allergy, Asthma and Immunology (AAAAI) National Conference, March 16, 2020; Accessed March 2, 2021.
3. Worm M et al. *Clin Transl Allergy.* 2020;10:21; 4. Duvauchelle T et al. *J Allergy Clin Immunol Pract.* 2018;6(4):1257-1263; 5. Breuer C et al. *Eur J Clin Pharmacol.* 2013;69:1303-1310; 6. US FDA. Epinephrine (Auvi-Q) clinical pharmacology and Biopharmaceutics review. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2012/201739Orig1s000ClinPharmR.pdf. Accessed on February 25, 2021; 7. Edwards ES et al. *Ann Allergy Asthma Immunol.* 2013;111(2):132-137.

- Dose levels for epinephrine have been established through decades of clinical experience rather than via efficacy studies
- Studies have shown a wide variation in PK results after injecting epinephrine
- PD markers for epinephrine are well established
- For injected epinephrine products, an expected range for C_{max} and T_{max} can be established from the literature



Anaphylaxis and Epinephrine **AQST-108 and AQST-109:** **Clinical Overview**

Dr. Mark Lepore
Chief Medical Officer
Allergy Therapies

Advancing medicines.
Solving problems.
Improving lives.

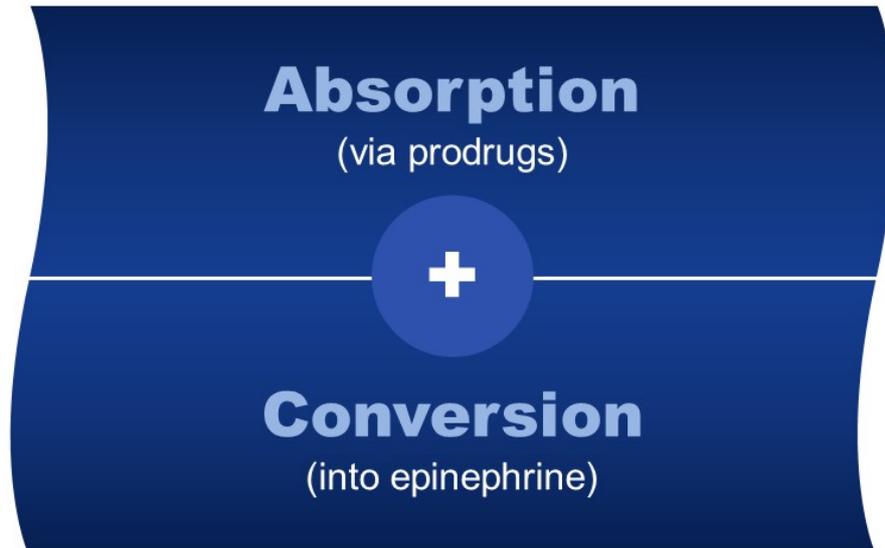


Dr. Mark Lepore

Chief Medical Officer, Allergy Therapies

- Trained in general pediatrics and allergy/clinical immunology
- Fellow of AAAAAI
- 10 years experience in private practice as a clinical investigator
- Teva Global Respiratory R&D and US Medical Affairs
- Lupin R&D, Inhalation and Complex Injectable Products
- Father of 3 food-allergic children





Protocol 180299

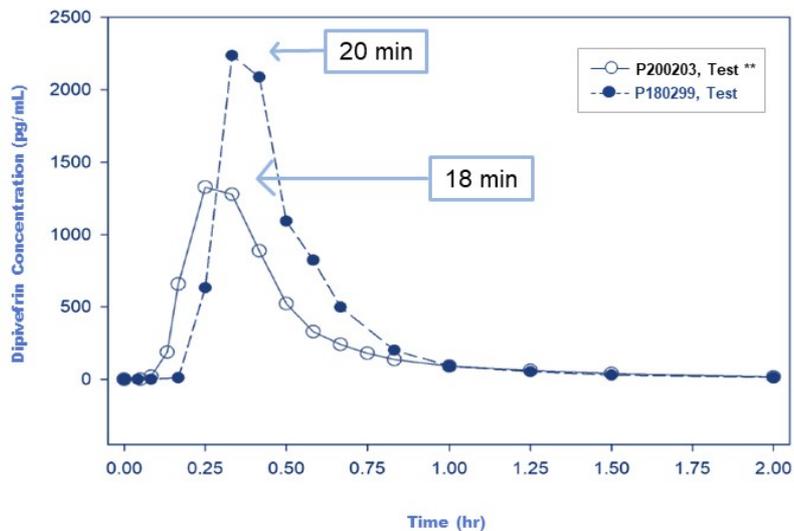
- Single-ascending dose study in healthy young male volunteers*
 - **Part 1**—dose levels of 0.6 mg, 3 mg, 6 mg, 12 mg, 24 mg, 30 mg, and 36 mg
- 6-12 subjects per dose level
- PK and PD measurements
 - Frequent sampling from pre-dose to 240 minutes post-dose

Protocol 200203

- 7-period, 4-treatment (with replication of 3 treatments), 3-sequence crossover
 - **Test**—24 mg dipivefrin sublingual film
 - **Ref 1**—0.3 mg SC epinephrine
 - **Ref 2**—0.3 mg IM epinephrine
 - **Safety**—0.5 mg SC epinephrine (not replicated, period 7)
- 28 subjects enrolled
- PK and PD measurements
 - Frequent sampling from pre-dose to 240 minutes post-dose

*Also referred to as a proof of concept or dose-escalation study.

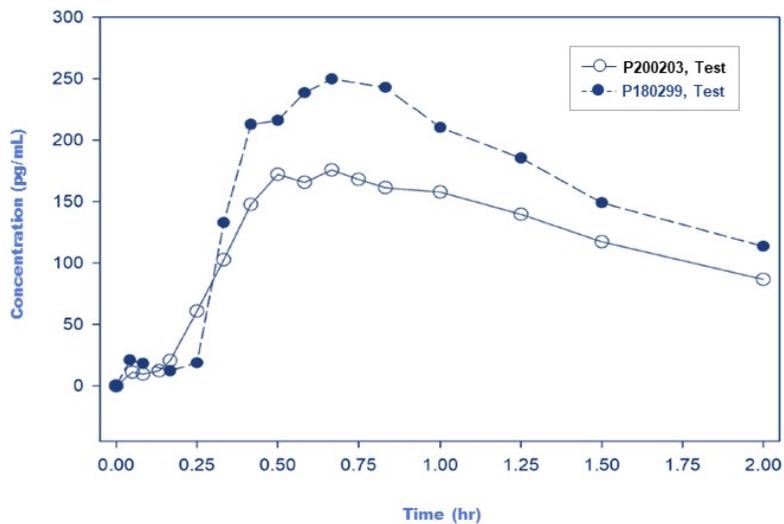
AQST-108: Rapid and Extensive Absorption*



Description	-203	-299
Cmax (pg/mL)	1276	1487
AUC 0-t (hr*pg/mL)	425	480
Tmax (min)	18	20
Tmax range (min)	10-40	15-34

* Compared with IM or SQ injected epinephrine **Represents 203 data from top line results.

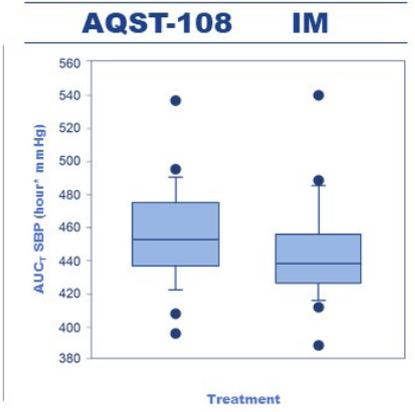
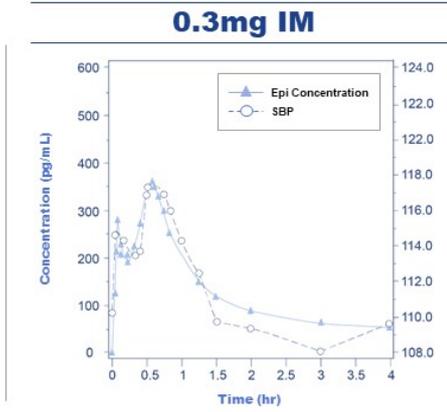
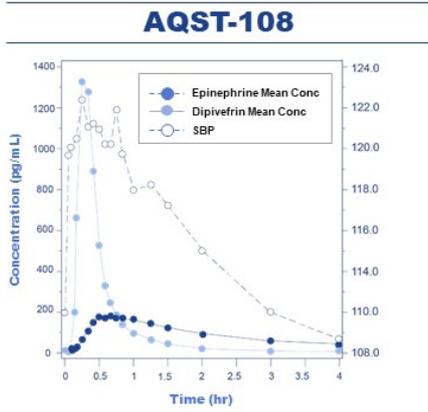
AQST-108: Conversion into Epinephrine Systemically



Description	-203	-299
Cmax (pg/ml)	205	261
AUC 0-t (hr*pg/ml)	332	497
Tmax (min)	40	28
Tmax Range (min)	11 - 106	20 - 60

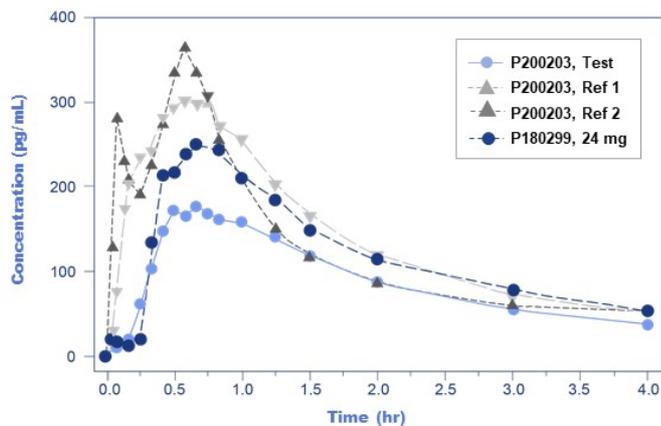
* Represents data from top-line results.

AQST-108: Compelling Pharmacodynamic (PD) Results When Compared to Epinephrine IM Injection



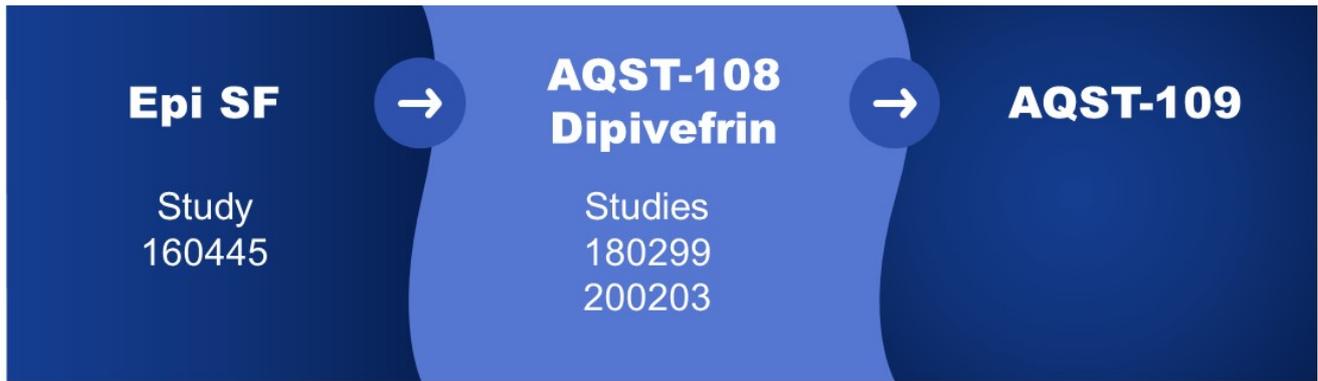
*Represents data from top-line results.
SBP=Systolic Blood Pressure

AQST-108: Critical Insights from Conversion Rate

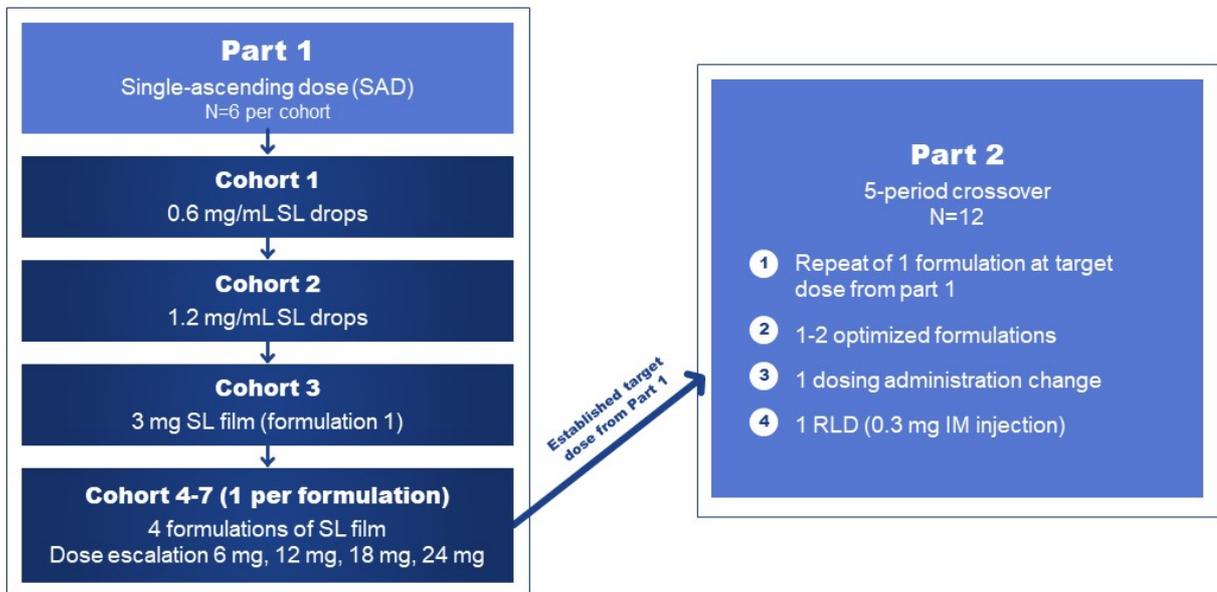


Description	AQST-108	SQ Injection	IM Injection
Cmax (pg/mL)	205	388	475
AUC 0-t (hr*pg/mL)	332	551	483
Tmax (min)	40	31	30
Tmax Range (min)	11-106	8-68	4-75

*Represents data from top-line results.



AQST-109 Designed to Minimize Conversion Time



Aquestive's AQST-108 has demonstrated

- Rapid and extensive absorption
- Conversion to epinephrine, but slower than desired
- Compelling changes in PD measures

Next steps

- Advance AQST-109 into PK trials
- Meet with FDA to discuss AQST-108 PD results and next steps



Anaphylaxis and Epinephrine
R&D Day: Summary

March 25, 2021

Advancing medicines.
Solving problems.
Improving lives.

Clinical/Regulatory Timeline – 2 “shots on goal”

AQST-108 sublingual film

- Single dose ascending study completed in H2 2019
- FDA pre-IND meeting completed in H1 2020
- FDA fast track designation received in H1 2020
- Phase 1 crossover study completed in H2 2020
- Anticipate FDA meeting in H2 2021

AQST-109 sublingual film

- First in Humans (FIH) Study dossier submitted to Health Canada; following study, anticipate:
 - FIH Study read-out in H2 2021
 - FDA pre-IND meeting in H2 2021
 - Opening IND in early 2022

- Anticipate:
 - Conducting pilot and pivotal PK studies in 2022
 - Conducting human factors study in 2022
 - Pre-NDA meeting with FDA end 2022

The Clinical Trial Application (CTA) is under review. Should Health Canada (HC) request additional information, the study timelines may be impacted. There can be no assurance that HC will take action on the CTA in a timely fashion.

Key Takeaways

- Large unmet need and a growing patient population
- AQST-108 and AQST-109 represent compelling opportunities for the oral delivery of epinephrine
- There is a known FDA pathway to approval





Aquestive Therapeutics Successfully Demonstrates Repeatable and Predictable Oral Sublingual Film Administration of Epinephrine

- Provides in-depth scientific and clinical data in R&D event today at 9:00 am ET
- Outlines data from two completed Phase 1 pharmacokinetic (PK) trials for AQST-108 (dipivefrin) sublingual film
- Articulates development strategy for second prodrug candidate, AQST-109 sublingual film
- Provides details on potential patent coverage to at least 2037

Warren, NJ, March 25, 2021 – Aquestive Therapeutics, Inc. (NASDAQ: AQST), a pharmaceutical company focused on developing and commercializing differentiated products that address patients' unmet needs and solve therapeutic problems, will provide later this morning an in-depth overview of its systemic epinephrine drug delivery program combining its novel prodrug technology and its PharmFilm® technology. At the R&D event, the management team and KOLs will share an extensive review of the science, clinical results, and development strategy associated with two prodrug candidates in development for the treatment of allergic reactions including anaphylaxis. Aquestive has submitted multiple U.S. and foreign patent applications that cover the technology and formulations for its two prodrug candidates, AQST-108 and AQST-109. If granted, Aquestive anticipates patent protection for both drug candidates through at least 2037.

“Aquestive is, we believe, the first and only company that has successfully demonstrated a repeatable and predictable capability for orally administering a film for the delivery of systemic epinephrine as indicated by the results from the two completed Phase 1 PK trials with AQST-108 that will be shared at today's R&D event,” remarked Dan Barber, Chief Operating Officer of Aquestive. “We have taken the learnings from the AQST-108 studies regarding absorption and conversion and have applied them to the development of our second generation prodrug, AQST-109. We plan to commence a Phase 1 PK trial with AQST-109 and anticipate a topline data readout in the second half of 2021.”

“Today is an exciting day for the Aquestive team,” said Keith Kendall, President and Chief Executive Officer of Aquestive. “Now that we have completed the submission of our initial patent applications, we are thrilled to provide our various stakeholders more insight into our scientific and clinical efforts to develop treatments for anaphylaxis. As we will discuss during our R&D event today, patients, caregivers, and healthcare providers remain highly interested in non-invasive routes of delivery for systemic epinephrine. Our surveys show that 80% of patients surveyed are interested in PharmFilm replacing their current medical device and 96% of patients surveyed believe that PharmFilm would be easier to administer during an emergency situation when compared to their current medical device.”

AQST-108 Sublingual Film

Aquestive plans to outline in the R&D event today that its “first of its kind” oral sublingual film candidate delivering systemic epinephrine, AQST-108, is composed of the prodrug dipivefrin, which is contained within a unique polymeric matrix of Aquestive's PharmFilm technology. Dipivefrin is currently approved by the FDA for ophthalmic indications. Dipivefrin is enzymatically cleaved systemically into epinephrine after administration.

Aquestive previously completed an initial PK trial (Protocol 180299). This study featured a single ascending dose design with between 6-12 healthy subjects completing each dosing level during Part I and Part II of the study. During the study, both PK and pharmacodynamic (PD) markers were measured. At the target dose level, the observed range for time to reach maximal concentration (T_{max}) for AQST-108 was 15-35 minutes, and the observed maximal concentration (C_{max}) was 1487 pg/mL. In addition, this study indicated that AQST-108 was rapidly converted to epinephrine with an observed epinephrine T_{max} range of 20-60 minutes and an observed C_{max} of 261 pg/mL.

Aquestive recently completed its second Phase 1 PK trial in 28 healthy adult subjects, which featured a four-treatment crossover design comparing PK, safety and pharmacodynamics of AQST-108 to that of epinephrine administered via both subcutaneous and intramuscular injections. In this study, the observed range for Tmax for AQST-108 was 10-40 minutes and the observed Cmax for AQST-108 was 1276 pg/mL. In addition, this study indicated that AQST-108 was rapidly converted to epinephrine with an observed Tmax range of 11-106 minutes and an observed Cmax of 205 pg/mL. This was compared to an epinephrine Tmax range of 4-75 minutes and 8-68 minutes and Cmax of 475 pg/mL and 388 pg/mL for the intramuscular and subcutaneous injections, respectively.

In addition, several pharmacodynamic markers were measured during the second Phase 1 PK study. AQST-108 demonstrated changes from baseline in heart rate, systolic blood pressure, and diastolic blood pressure which are relevant in the context of anaphylaxis treatment and epinephrine's mechanism of action. For instance, for the area under the effect curve (AUEC) for systolic blood pressure, the median values for AQST-108 and intramuscular injected epinephrine were 452 and 428 (in hr*mm hg), respectively, indicating a comparable effect from both treatments on systolic blood pressure in healthy volunteers. A similar pattern was demonstrated for other pharmacodynamic measures as well.

Aquestive plans on meeting with the FDA in the second half of 2021 to review these results and discuss next steps in the development of AQST-108.

AQST-109 Sublingual Film

During today's R&D event, Aquestive will articulate its development strategy for a second epinephrine prodrug candidate, AQST-109 sublingual film. AQST-109 is a next generation prodrug of epinephrine that Aquestive intends to develop for sublingual treatment of allergic reactions including anaphylaxis. In vitro tests and preclinical studies indicate that AQST-109 has the potential to absorb more extensively, convert more rapidly to systemic epinephrine, utilize less drug and provide a unique profile when compared to AQST-108. Aquestive anticipates conducting and completing a single ascending dose PK study in the second half of 2021. Based upon receiving favorable topline results from the study, Aquestive intends to request a pre-IND meeting with the FDA.

Webcast Access/Replay

A webcast of the virtual R&D event today at 9:00 am ET and accompanying slides will be available under "Events and Presentations" in the Investors section of the Company's website at <https://investors.aquestive.com/events-and-presentations>. In addition, the R&D event can be accessed by dialing (833) 640-1722 from the U.S. and (602) 585-9829 internationally, followed by the conference ID: 3598556. The event webcast will be archived for 30 days.

About Anaphylaxis

Anaphylaxis is a potentially life-threatening systemic allergic reaction, with an estimated incidence of 50 to 112 episodes per 100,000 people per year. The frequency of hospital admissions for anaphylaxis has increased 500-700% in the last 10-15 years. The most common causes of reactions that can include anaphylaxis are medications, foods (such as peanuts), and venom from insect stings. Epinephrine injection is the current standard of treatment intended to reverse the potentially severe manifestation of anaphylaxis, which may include red rash, throat swelling, respiratory problems, gastrointestinal distress and loss of consciousness.

About Aquestive Therapeutics

Aquestive Therapeutics is a pharmaceutical company that applies innovative technology to solve therapeutic problems and improve medicines for patients. The Company has commercialized one internally-developed proprietary product to date, Sympazan® (clobazam) oral film, has a commercial proprietary product pipeline focused on the treatment of diseases of the central nervous system, or CNS, and other unmet needs, and is developing orally administered complex molecules to provide alternatives to invasively administered standard of care therapies. The Company also collaborates with other pharmaceutical companies to bring new molecules to market using proprietary, best-in-class technologies, like PharmFilm®, and has proven capabilities for drug development and commercialization.

Forward-Looking Statements

Certain statements in this press release include “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “believe,” “anticipate,” “plan,” “expect,” “estimate,” “intend,” “may,” “will,” or the negative of those terms, and similar expressions, are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements regarding the advancement of AQST-108, AQST-109 and other product candidates through the regulatory and development pipeline; and business strategies, market opportunities, and other statements that are not historical facts. These forward-looking statements are subject to the uncertain impact of the COVID-19 global pandemic on our business including with respect to our clinical trials including site initiation, patient enrollment and timing and adequacy of clinical trials; on regulatory submissions and regulatory reviews and approvals of our product candidates; pharmaceutical ingredient and other raw materials supply chain, manufacture, and distribution; sale of and demand for our products; our liquidity and availability of capital resources; customer demand for our products and services; customers’ ability to pay for goods and services; and ongoing availability of an appropriate labor force and skilled professionals. Given these uncertainties, the Company is unable to provide assurance that operations can be maintained as planned prior to the COVID-19 pandemic.

These forward-looking statements are based on our current expectations and beliefs and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Such risks and uncertainties include, but are not limited to, risks associated with the Company’s development work, including any delays or changes to the timing, cost and success of our product development activities and clinical trials and plans for AQST-108, AQST-109 and our other drug candidates; risk of delays in FDA approval of our drug candidates Libervant, AQST-108, AQST-109 and our other drug candidates or failure to receive approval; ability to address the concerns identified in the FDA’s Complete Response Letter dated September 25, 2020 regarding the New Drug Application for Libervant; risk of our ability to demonstrate to the FDA “clinical superiority” within the meaning of the FDA regulations of Libervant relative to FDA-approved diazepam rectal gel and nasal spray products including by establishing a major contribution to patient care within the meaning of FDA regulations relative to the approved products as well as risks related to other potential pathways or positions which are or may in the future be advanced to the FDA to overcome the seven year orphan drug exclusivity granted by the FDA for the approved nasal spray product of a competitor in the U.S. and there can be no assurance that we will be successful; risk that a competitor obtains FDA orphan drug exclusivity for a product with the same active moiety as any of our other drug products for which we are seeking FDA approval and that such earlier approved competitor orphan drug blocks such other product candidates in the U.S. for seven years for the same indication; risk inherent in commercializing a new product (including technology risks, financial risks, market risks and implementation risks and regulatory limitations); risk of development of our sales and marketing capabilities; risk of legal costs associated with and the outcome of our patent litigation challenging third party at risk generic sale of our proprietary products; risk of sufficient capital and cash resources, including access to available debt and equity financing and revenues from operations, to satisfy all of our short-term and longer term cash requirements and other cash needs, at the times and in the amounts needed; risk of failure to satisfy all financial and other debt covenants and of any default; our and our competitors’ orphan drug approval and resulting drug exclusivity for our products or products of our competitors; short-term and long-term liquidity and cash requirements, cash funding and cash burn; risk related to government claims against Indivior for which we license, manufacture and sell Suboxone® and which accounts for the substantial part of our current operating revenues; risks related to the outsourcing of certain marketing and other operational and staff functions to third parties; risk of the rate and degree of market acceptance of our product and product candidates; the success of any competing products, including generics; risk of the size and growth of our product markets; risks of compliance with all FDA and other governmental and customer requirements for our manufacturing facilities; risks associated with intellectual property rights and infringement claims relating to the Company’s products; risk of unexpected patent developments; the impact of existing and future legislation and regulatory provisions on product exclusivity; legislation or regulatory actions affecting pharmaceutical product pricing, reimbursement or access; claims and risks that may arise regarding the safety or efficacy of the Company’s products and product candidates; risk of loss of significant customers; risks related to legal proceedings, including patent infringement, investigative and antitrust litigation matters; changes in government laws and regulations; risk of product recalls and withdrawals; uncertainties related to general economic, political, business, industry, regulatory and market conditions and other unusual items; and other uncertainties affecting the Company described in the “Risk Factors” section and in other sections included in our Annual Report on Form 10-K, in our Quarterly Reports on Form 10-Q, and in our Current Reports on Form 8-K filed with the Securities Exchange Commission (SEC). Given those uncertainties, you should not place undue reliance on these forward-looking statements, which speak only as of the date made. All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by this cautionary statement. The Company assumes no obligation to update forward-looking statements or outlook or guidance after the date of this press release whether as a result of new information, future events or otherwise, except as may be required by applicable law.

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