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 8, 2021

ELIEM THERAPEUTICS, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-40708**	**83-2273741**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

23515 NE Novelty Hill Road, Suite B221 #125 Redmond, WA	**98053**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's Telephone Number, Including Area Code: (425) 276-2300

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 $0.0001 per share	**ELYM**	**The Nasdaq Stock Market LLC (The 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 2.02 Results of Operations and Financial Condition.

On November 8, 2021, Eliem Therapeutics, Inc. (the "Company") issued a press release announcing its financial results for the quarter ended September 30, 2021. A copy of the press release is attached hereto as Exhibit 99.1.

The information in this Item and the exhibit attached hereto are being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall they be deemed incorporated by reference into any filing under the Exchange Act or the Securities Act of 1933, as amended, whether filed before or after the date hereof and regardless of any general incorporation language in such filing.

Item 7.01 Regulation FD Disclosure.

A copy of a slide presentation that the Company will use at investor conferences and presentations is attached to this Current Report as Exhibit 99.2 and is incorporated herein solely for purposes of this Item 7.01 disclosure.

The information in this Item 7.01 (including Exhibit 99.2) is being furnished, not filed, pursuant to Regulation FD. Accordingly, the information in this Item 7.01 will not be incorporated by reference into any registration statement filed by the Company under the Securities Act of 1933, as amended, unless specifically identified therein as being incorporated therein by reference. The furnishing of the information in this Item 7.01 is not intended to, and does not, constitute a determination or admission by the Company that this information is material or complete, or that investors should consider this information before making an investment decision with respect to any security of the Company.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Press release of Eliem Therapeutics, Inc., dated November 8, 2021
99.2	Investor Presentation dated November 2021
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

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 thereunto duly authorized.

Eliem Therapeutics, Inc.

Date: November 8, 2021

By: /s/ Robert W. Azelby

Robert W. Azelby

Chief Executive Officer

Exhibit 99.1

Eliem Therapeutics Reports Third Quarter Financial and Business Highlights

Advanced ETX-155 clinical development program, with the first subject successfully screened in epilepsy proof-of-concept trial and significant progress made toward the initiation of major depressive disorder (MDD) and perimenopausal depression (PMD) clinical trials

Continued to enroll ETX-810's two Phase 2a chronic pain clinical trials, with topline data anticipated in the first half of 2022

On track to progress Kv7.2/3 channel opener program into Investigational New Drug (IND)-enabling studies in the first half of 2022

SEATTLE and CAMBRIDGE, UK, --(BUSINESS WIRE) – November 8, 2021 – Eliem Therapeutics, Inc. (Nasdaq: ELYM), a clinical-stage biotechnology company focused on developing novel therapies for neuronal excitability disorders to address unmet needs in chronic pain, psychiatry, epilepsy and other disorders of the peripheral and central nervous systems, today reported financial results and business highlights for the quarter ended September 30, 2021.

"Our clinical execution is progressing well," said Bob Azelby, Eliem's president and chief executive officer. "For ETX-155, we are excited to report that we have completed our Phase 1 studies, we have successfully screened our first patient in our photosensitive epilepsy (PSE) proof-of-concept clinical trial and we continue to progress clinical development activities for the launch of our phase 2a trials evaluating ETX-155 in patients with MDD and PMD. As we look to expand our clinical pipeline, we are increasingly excited about the potential of our Kv7.2/3 channel opener program as a clinically validated mechanistic approach to treat diseases such as epilepsy, pain and MDD, and we remain on track to progress the program into IND-enabling studies in the first half of 2022."

Third Quarter 2021 Highlights and Recent Developments

Completed 14-day repeat dose Phase 1 study demonstrating ETX-155 was well tolerated with an approximate 40-hour half-life supporting once-daily dosing. The 14-day, repeat dose, Phase 1 study evaluated the pharmacokinetic profile and safety of ETX-155 in 20 healthy human subjects, evaluating 60 mg ETX-155 (n=15) or placebo (n=5) dosed daily in the evening for 14 days. Results demonstrated ETX-155 reached steady state concentration at Day 8 and had an approximate 40-hour half-life, confirming ETX-155's desirable profile for a once-daily dosing regimen. The study also confirmed that ETX-155 was generally well tolerated with no severe or serious adverse events, or discontinuations. All treatment-emergent adverse events (TEAEs), including central nervous system (CNS) adverse events, were mild/moderate and transient. In particular, all somnolence adverse events were mild and the incidence was comparable in the ETX-155 and placebo groups. Notably, somnolence events were sporadic, and no subject who reported somnolence in either the ETX-155 or placebo arms reported it more than once during the dosing or follow-up period. In addition, there was no clinically meaningful

difference compared to placebo in sleep quality or next morning state of arousal, as measured by the Leeds Sleep Evaluation Questionnaire. The tolerability and safety findings of this study were consistent with those of the previous 7-day repeat dose and single ascending dose Phase 1 study. Collectively, the Company's Phase 1 studies have demonstrated that ETX-155 has differentiated pharmacokinetic properties, including no clinically meaningful food effect and an approximate 40-hour half-life to enable a once-daily dosing regimen.

Screened the first subject in ETX-155 photosensitive epilepsy clinical trial: The Company anticipates dosing the first subject in the single-arm proof-of-concept Phase 1b PSE trial by the end of 2021. Precedent literature demonstrates that activity in single-dose PSE trials can be a reliable predictor of anticonvulsant activity in various forms of epilepsy, such as focal onset seizure.

Advanced study start-up activities for ETX-155 Phase 2a clinical trials in MDD and PMD: The Company anticipates dosing the first subject in each of these studies in early 2022, assuming regulatory approval of its IND application.

Program Updates and Anticipated Milestones

ETX-810 in chronic pain: ETX-810 is a novel new chemical entity prodrug of the bioactive lipid palmitoylethanolamide that is currently being evaluated in two Phase 2a clinical trials in subjects with diabetic peripheral neuropathic pain (DPNP) and lumbosacral radicular pain (LSRP), commonly referred to as sciatica.

- ETX-810 in DPNP. The ongoing Phase 2a prospective, multi-center, randomized, double-blind, placebo-controlled, parallel-group clinical trial evaluating the efficacy and safety of ETX-810 in subjects with DPNP remains on track to have topline data readout during the first half of 2022.

- ETX-810 in LSRP. The ongoing Phase 2a prospective, multi-center, randomized, double-blind, placebo-controlled, parallel-group clinical trial evaluating the efficacy and safety of ETX-810 in subjects with LSRP remains on track to have topline data readout during the first half of 2022.

ETX-155 in depression and epilepsy: ETX-155 is a novel $GABA_A$ receptor positive allosteric modulator (PAM) that Eliem plans to evaluate in subjects with MDD, PMD and focal onset seizure (FOS).

- ETX-155 in FOS. The Company expects to report topline data from its ongoing single-arm, proof-of-concept Phase 1b trial in subjects with PSE in the first half of 2022. This study is intended to support progression into a Phase 2 study in FOS, given precedent literature demonstrating that activity in single dose PSE trials can be a reliable predictor of anticonvulsant activity in focal onset seizure.
- ETX-155 in MDD and PMD. Assuming regulatory approval of the Company's IND application, the Company expects to dose its first subjects in two randomized, placebo-controlled, Phase 2a proof-of-concept trials of ETX-155 in early 2022. Topline data from each trial is expected in the first half of 2023.

Kv7.2/3 channel opener program: The Company's preclinical program targets the Kv7.2/3 potassium channel that has been shown to control neuronal excitability, with clinical validation in pain and epilepsy. The program remains on track to progress to IND-enabling studies in the first half of 2022.

Anxiolytic for generalized anxiety disorder (GAD): The Company is also in early preclinical development of a novel, rapid-acting, non-sedating, non-addictive anxiolytic for the potential treatment of GAD, based on a clinically validated mechanism. The Company plans to continue the preclinical development of this program in 2022.

Third Quarter 2021 Financial Results

- Cash Position: Cash, cash equivalents and marketable securities was $169.6 million as of September 30, 2021, as compared to $99.5 million as of June 30, 2021. This includes net proceeds from the Company's August 2021 initial public offering. The Company's current cash, cash equivalents and marketable securities are expected to fund operations through late 2023.
- Research and Development (R&D) expenses: R&D expenses were $6.0 million for the three months ended September 30, 2021, compared to $1.9 million for the same period in 2020.
- General and Administrative (G&A) expenses: G&A expenses were $3.4 million for the three months ended September 30, 2021, compared to $0.3 million for the same period in 2020.
- Net loss: Net loss was $9.6 million for the three months ended September 30, 2021, compared to $2.3 million for the same period in 2020.

About Eliem Therapeutics, Inc.
Eliem Therapeutics, Inc. is a clinical-stage biotechnology company focused on developing novel therapies for neuronal excitability disorders to address unmet needs in chronic pain, psychiatry, epilepsy and other disorders of the peripheral and central nervous systems. These disorders often occur when neurons are overly excited or inhibited, leading to an imbalance, and our focus is on restoring homeostasis. We are developing a pipeline of clinically differentiated product candidates focused on validated mechanisms of action with broad therapeutic potential to deliver improved therapeutics for patients with these disorders. Eliem channels its experience, energy, and passion for improving patients' quality of life to fuel our efforts to develop life-changing novel therapies. At its core, the Eliem team is motivated by the promise of helping patients live happier, more fulfilling lives.
https://eliemtx.com/

Forward-Looking Statements

This press release contains forward-looking statements, including, without limitation, statements relating to: the continued development and clinical and therapeutic potential ETX-155 and ETX-810; Eliem's plans to initiate clinical trials of ETX-155 and the timing thereof; anticipated data readouts of ETX-810 and ETX-155 and the timing thereof; the progression of the Kv7.2/3 and next-generation anxiolytic preclinical programs; the expectation that Eliem's current cash, cash equivalents and marketable securities will fund operations through late 2023; and Eliem's commitment to developing therapies targeting debilitating disorders. Words such as "on track," "advance," "progress," "toward," "continue," "excited," "potential," "expand," "anticipate," "milestones," "expect," "demonstrates," "intended," "plans," "runway," "initiate," "support," "enable," or other similar expressions, identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward-looking. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. The forward-looking statements in this press release are based upon Eliem's current plans, assumptions, beliefs, expectations, estimates and projections, and involve substantial risks and uncertainties. Actual results and the timing of events could differ materially from those anticipated in the forward-looking statements due to these risks and uncertainties as well as other factors, which include, without limitation: the clinical, therapeutic and commercial value of ETX-810, ETX-155 and Eliem's preclinical

programs; risks related to the potential failure of ETX-810 and ETX-155 to demonstrate safety and efficacy in clinical testing; Eliem’s ability to initiate and conduct clinical trials and studies of ETX-810 and ETX-155 sufficient to achieve a positive completion; the availability of data at the expected times; Eliem's ability to obtain and protect intellectual property rights, and operate without infringing on the intellectual property rights of others; the uncertain timing and level of expenses associated with Eliem's preclinical and clinical development activities; the sufficiency of Eliem's capital and other resources; risks and uncertainties related to Eliem's compliance with applicable legal and regulatory requirements; market competition; changes in economic and business conditions; impacts on Eliem’s business due to health pandemics or other contagious outbreaks, such as the current COVID-19 pandemic; and other factors discussed under the caption "Risk Factors" in Eliem's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2021. This filing, when available, is available on the SEC's website at www.sec.gov. Additional information will also be set forth in Eliem's other reports and filings it will make with the SEC from time to time. The forward-looking statements made in this press release speak only as of the date of this press release. Eliem expressly disclaims any duty, obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Eliem's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

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Eliem Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(In thousands, except share and per share amounts)
(unaudited)

Assets	**September 30, 2021**	**December 31, 2020**
Current assets:		
Cash and cash equivalents	$ 62,819	$ 20,487
Short-term marketable securities	83,199	—
Prepaid expenses and other current assets	12,614	1,511
Total current assets	$ 158,632	$ 21,998
Long-term marketable securities	23,619	—
Other long-term assets	—	2,633
Total assets	$ 182,251	$ 24,631
Liabilities, Redeemable Convertible Preferred Stock, and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	2,579	1,086
Accounts payable, related party	—	207
Accrued expenses	2,979	1,219
Accrued expenses, related party	32	—
Redeemable convertible preferred stock tranche liability	—	551
Total current liabilities	$ 5,590	$ 3,063
Total liabilities	$ 5,590	$ 3,063
Commitments and contingencies		
Redeemable convertible preferred stock, $0.0001 par value, 10,000,000 and 12,909,389 shares authorized, 0 and 7,140,157 shares issued and outstanding with aggregate liquidation preference of $0 and $49,891 at September 30, 2021 and December 31, 2020, respectively	—	46,551
Stockholders' equity (deficit):		
Common stock, $0.0001 par value per share, 250,000,000 and 40,000,000 shares authorized; 26,199,262 and 3,418,751 shares issued and outstanding at September 30, 2021 and December 31, 2020, respectively	3	1
Additional paid-in capital	241,747	3,152
Accumulated other comprehensive income	(18)	—
Accumulated deficit	(65,071)	(28,136)
Total stockholders' equity (deficit)	$ 176,661	$ (24,983)
Total liabilities, redeemable convertible preferred stock, and stockholders' equity (deficit)	$ 182,251	$ 24,631

Eliem Therapeutics, Inc.
Condensed Consolidated Statements of Operations
(In thousands, except share and per share amounts)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Operating expenses:				
Research and development	$ 5,704	$ 1,930	$ 15,455	$ 4,644
Research and development, related party	285	17	988	286
General and administrative	3,394	312	8,526	888
Total operating expenses	9,383	2,259	24,969	5,818
Loss from operations	(9,383)	(2,259)	(24,969)	(5,818)
Other income (expense):				
Change in fair value of redeemable convertible preferred stock tranche liability	—	—	(11,718)	—
Foreign currency gain (loss)	(252)	1	(268)	13
Other income, net	20	—	20	—
Total other income (expense)	(232)	1	(11,966)	13
Net loss	$ (9,615)	$ (2,258)	$ (36,935)	$ (5,805)
Accretion of redeemable convertible preferred stock to redemption value and cumulative preferred stock dividends	(1,322)	(461)	(4,548)	(1,352)
Net loss attributable to common stockholders	$ (10,937)	$ (2,719)	$ (41,483)	$ (7,157)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.70)	$ (1.46)	$ (5.49)	$ (3.85)
Weighted-average number of shares outstanding used to compute net loss per share attributable to common stockholders, basic and diluted	15,585,611	1,863,860	7,554,300	1,859,713

Clinical Stage Neurology Company Focused on Neuronal Excitability Disorders

Corporate Presentation | November 2021

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Forward-Looking Statements

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including statements regarding our future financial condition, results of operations, business strategy and plans, and objectives of management for future operations, as well as statements regarding industry trends, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potentially," "predict," "should," "will" or the negative of these terms or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things, risks related to: the success, cost and timing of our product development activities and clinical trials; our expectations about the timing of achieving regulatory approval and the cost of our development programs; our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates; the impact of the COVID-19 pandemic on our operations; the commercialization of our product candidates, if approved; our plans to research, develop and commercialize our product candidates; our plans to develop additional product candidates; our ability to obtain, maintain, expand, protect and enforce our intellectual property rights; our ability to operate our business without infringing, misappropriating or otherwise violating the intellectual property rights of third parties; our ability to attract collaborators with development, regulatory and commercialization expertise; future agreements with third parties in connection with the commercialization of our product candidates; the size and growth potential of the markets for our product candidates and our ability to serve those markets; the rate and degree of market acceptance of our product candidates; regulatory developments in the United States and foreign countries; our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately; the success of competing products that are or may become available; and our ability to attract and retain key scientific or management personnel. These risks are not exhaustive. New risk factors emerge from time to time and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements. More information about the risks and uncertainties faced by Eliem is contained under the caption "Risk Factors" set forth in Eliem's Quarterly Report on Form 10-Q for the quarter ended September 30, 2021, which is available on the SEC's website at www.sec.gov, and in other subsequent reports and filings Eliem will make with the SEC from time to time. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this presentation.

Certain information contained in this presentation relates to, or is based on, studies, publications, surveys and other data obtained from third-party sources and the Company's own internal estimates and research. While we believe these third-party sources to be reliable as of the date of this presentation, we have not independently verified, and make no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us. Finally, while we believe our own internal research is reliable, such research has not been verified by any independent source.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this presentation, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Rethinking treatment for nervous system disorders

- **Highly experienced** management team
- **Clinical and preclinical pipeline** based on clinically validated mechanisms of action
- Two clinically differentiated lead product candidates with **top-line data readouts across five indications over next 24 months**
- **~$170M* cash runway to late 2023** allows for top line data readouts and advancement of preclinical assets

* Cash, cash equivalents and marketable securities as of September 30, 2021

Powered by Successful and Talented Executives from Pioneering Organizations

General Management, Commercial & Corporate Development

Robert Azelby, MBA
Chief Executive Officer

Erin Lavelle
Chief Operating Officer & Chief Financial Officer

James Bucher, JD
EVP and General Counsel

Research & Development

Valerie Morisset, PhD
EVP R&D and Chief Scientific Officer

Joanne Palmer, PhD
Chief Development Officer

Amy Chappell, MD
Chief Medical Officer

Deep expertise in neuroscience research, clinical development and commercialization

- Cymbalta, Lamictal, Neurontin, Lyrica, Trobalt, Vyepti, Vixotrigine

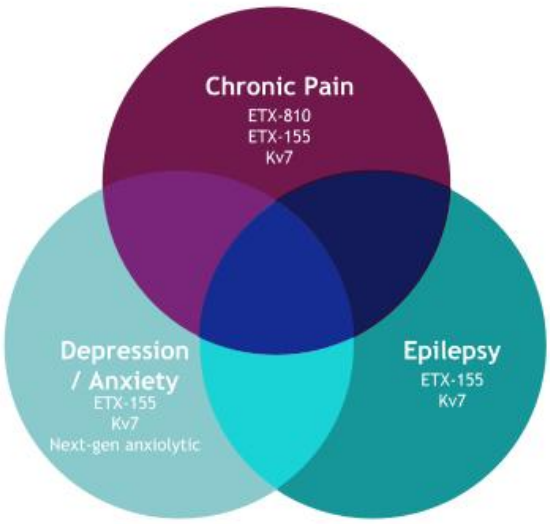
Leadership experience in both large pharma and small biotech

- Large: Amgen, GSK, Novartis, Biogen, Lilly
- Small: Alder, Juno, Convergence, Exelixis

Highly skilled in public/private capital raising and corporate development with successful exits

- Exits: Alder, Convergence, Juno, Immunomedics, Cascadian

Eliem is Developing Novel Therapies With Multiple Opportunities to Address Interrelated Diseases



Approaching **interrelated disease states** with multiple MOAs

Innovating within **clinically validated** mechanisms of action

Multiple **"pipeline-in-a-product"** opportunities

Eliem Pipeline: Four Programs with Clinically Validated MOAs and Multiple Upcoming Clinical Catalysts

Product Candidate (Mechanism)	Lead indications	Preclinical	Phase 1	Phase 2	Anticipated Clinical Milestones
ETX-810 (PEA prodrug)	Diabetic peripheral neuropathic pain				Topline Phase 2a data (1H 2022)
	Lumbosacral radicular pain (sciatica)				Topline Phase 2a data (1H 2022)
ETX-155 ($GABA_A$ receptor PAM)	Major depressive disorder (MDD)				Topline Phase 2a data (1H 2023)
	Perimenopausal depression (PMD)				Topline Phase 2a data (1H 2023)
	Focal onset seizure (FOS)				Phase 1b photosensitive epilepsy data (1H 2022)
Kv7 Program (Kv7.2/3 channel opener)	Pain, Epilepsy, Depression				
Next Gen Anxiolytic (2,3-benzo)	Generalized anxiety disorder (GAD)				

PEA: palmitoylethanolamide
$GABA_A$ PAM: $GABA_A$ receptor positive allosteric modulator

ETX-810

Anticipated Milestones

Diabetic Peripheral Neuropathic Pain (DPNP)
Phase 2a Data 1H 2022

Lumbosacral Radicular Pain (LSRP)
Phase 2a Data 1H 2022

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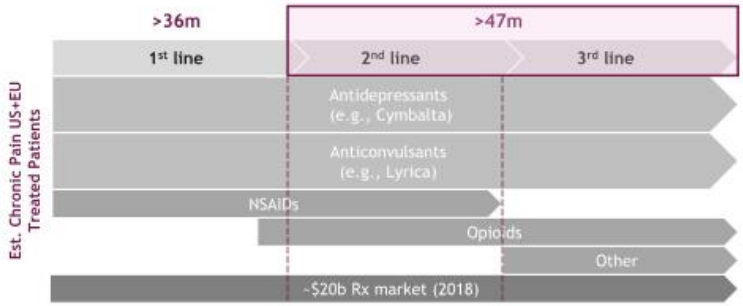
Chronic Pain: Large Commercial Opportunity with High Unmet Need

Current Treatment Paradigm



Unmet Need

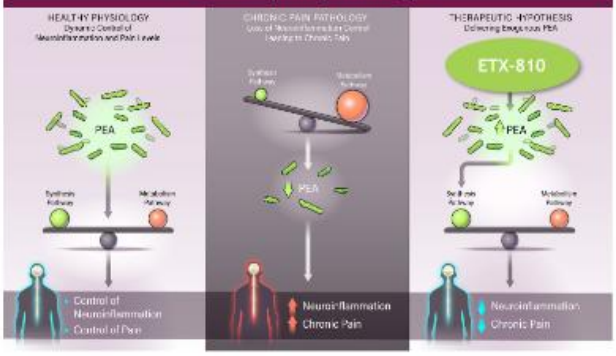
- **<50% of patients achieve ≥50% reduction in pain** → significant residual pain
- **Significant tolerability issues** (e.g., dizziness, nausea, somnolence, weight gain)
- **Poor compliance / frequent switching**
- **Abuse liabilities** (e.g., opioids)
- **Novel MoAs** → polypharmacy/ combination therapy

ETX-810 has opportunity to be preferred 2nd line monotherapy or used in combination

Sources:
Decision Resources Group (DRG), Neuropathic Pain Landscape and Forecast (June 2020); DRG Current Treatment: Physician Insights, Neuropathic pain (October 2019)
Decision Resources Group (DRG), Chronic Pain Landscape and Forecast (March 2021); DRG Current Treatment: Physician Insights, Chronic Pain (July 2019)

ETX-810: Prodrug of PEA (palmitoylethanolamide), an Endogenous Bioactive Lipid Acting as a Master Regulator of Neuroinflammation and Pain Signaling

Reduced PEA levels hypothesized in chronic pain pathology[1]



PEA is a master regulator of neuroinflammation and pain signaling with a pleiotropic mechanism[1]

- **Inhibition of inflammatory mediator release** from mast cells/monocytes/macrophages
- **Agonism of PPAR-alpha →** inhibition of pro-inflammatory gene expression
- **Agonism of GPR55 →** action on microglia activation and phagocytic activity
- **Entourage effect via FAAH inhibition →** increase endocannabinoid levels (AEA, 2-AG, OEA)

ETX-810 is being developed to restore PEA levels to reduce persistent neuroinflammation and pain signaling in chronic pain

1. Petrosino and Di Marzo, *Br J Pharmacol*. 2017 174:1349

Clinical Validation of PEA: Compelling Body of Evidence Highlighting PEA's Activity and Tolerability in Chronic Pain

PEA in Chronic Pain
>2,500 patients treated with PEA in >35 published clinical studies of PEA
>1500 patients studied in 15 RCTs -900 patients treated with PEA

Meta-Analyses of PEA Chronic Pain Clinical Studies

Reference	Key Conclusions
Paladini 2016[1] (12 studies)	**81% achieved "mild pain" by day 60** (compared to 41% in control)
Artukoglu 2017[2] (8 RCTs)	**2-point pain score reduction*** vs control

*Mean pain score delta vs placebo for benchmark chronic pain drugs:	Cymbalta - 0.8 to 1.2[3] Lyrica - 0.5 to 1.1[4]

Consistent, clinically meaningful reductions in pain

Benign tolerability profile

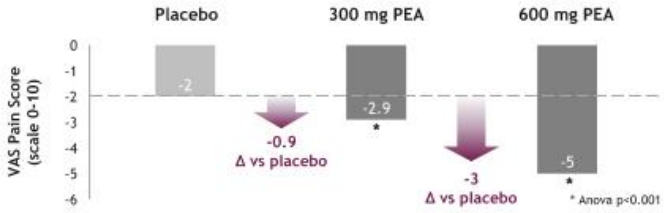
Activity across a broad range of chronic pain conditions

1. Paladini et al., *Pain Physician*, 2016, 19:11-24
2. Artukoglu et al., *Pain Physician*, 2017, 20:353-362
3. From Cymbalta (duloxetine) meta-analyses in chronic pain: Osani et al., *Korean J Intern Med*, 2019;34(5):966-973; Weng et al., *Osteoarthritis Cartilage*, 2020;28(6):721-734; Enomoto et al., *J Pain Res*, 2017;10:1357-1368; Ney et al., *Pain Medicine*, 2013;14:706-719
4. From Lyrica (pregabalin) meta-analyses in chronic pain: Onakpoya et al., *BMJ Open*, 2019;9(1):e023600; Parsons et al., *Curr Med Res Opin*, 2016;32(5):929-37; Zhang et al., *Acta Anaesthesiol Scand*, 2015;59(2):147-59; Ney et al., *Pain Medicine*, 2013;14:706-719

Clinical Validation of PEA: Two Large Placebo-Controlled Studies Demonstrate Clinical Activity and Dose-Dependent Response

Guida 2010[1] - Low back pain / sciatica
N=636, PEA monotherapy 300 mg / 600 mg vs placebo, 21-day BID dosing

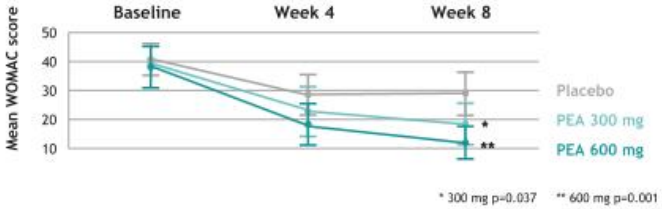
Pain Score Reduction



- **Statistically significant reduction in pain** vs placebo at d21
- 600 mg significantly better than 300 mg
- **82%** of 600 mg group had ≥50% reduction in pain[2]
- Higher neuropathic pain correlated with higher efficacy[2]

Steels 2019[3] - Knee osteoarthritis
N=111, PEA monotherapy 300 mg / 600 mg vs placebo, 8-week BID dosing

WOMAC total score



- **Significant reduction in WOMAC total score** (pain, stiffness, and function) vs placebo at Wk 8, with dose-dependent response
- **Statistically significant reduction in NRS pain** vs placebo at Wk 8 (-2.1 pain reduction vs placebo at 600mg, data not shown)

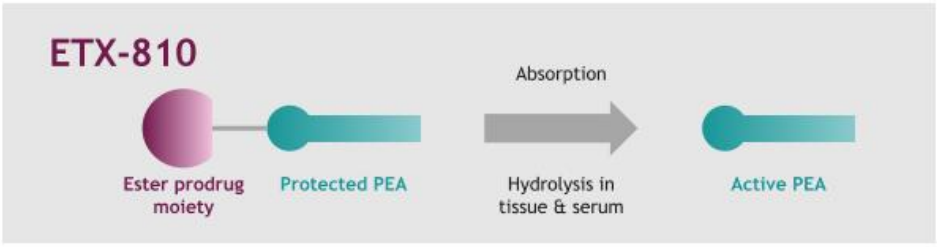
1. Guida et al, *DOLOR*, 2010; 25:35-42
2. Post-hoc analysis of Guida low back pain study by Cruccu et al, *CNS & Neurological Disorders - Drug Targets*, 2019; 18:491-495
3. Steels et al, *Inflammopharmacology*, 2019;27:475-485

VAS: Visual Analog Scale
WOMAC: Western Ontario and McMaster Universities Osteoarthritis Index
NRS: Numerical Rating Scale (segmented numeric version of VAS scale)

ETX-810: Opportunity to Be a First-in-Class PEA Prescription Therapeutic for Chronic Pain

Program Rationale

- **Clear dose response** in PEA RCTs
- **Opportunity to enhance exposure**
- **Develop new chemical entity** (NCE) through prodrug approach



Program Goals

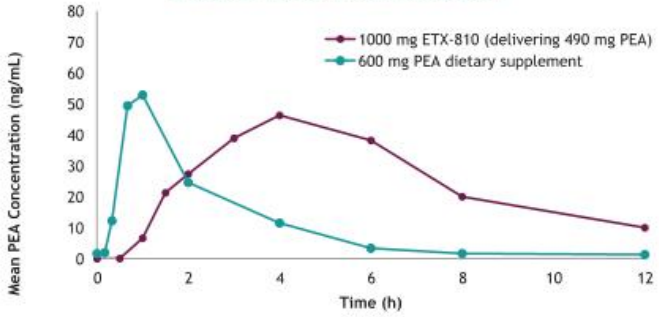
- **Optimize PK of bioactive PEA**
- **Maximize probability of clinical trial success**
- **Bring regulated PEA product to market** supported by robust RCTs

- **Rapid oral absorption and conversion** to biologically active PEA through series of enzymatic hydrolysis steps
- **Favorable pharmacokinetics** - increased half-life and dose-dependent increase in exposure
- **Strong preclinical activity and dose-dependent effect** in models of inflammatory pain and neuropathic pain
- **New IP generated** with patent protections to 2037

ETX-810 Has an Improved PK Profile and 3X Higher Exposure Compared to Dietary Supplement PEA

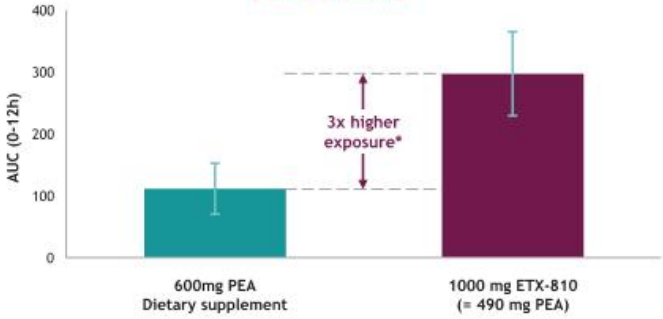
Prodrug pharmacokinetics results in higher PEA concentration over time and 3x exposure improvement

PEA concentration over time



Longer half-life of bioactive PEA
Significantly higher area under the curve

PEA exposure



1000 mg BID dosing expected to yield 6x higher PEA exposure

*Up to ~6x higher exposure on daily basis with 1000 mg BID dosing

Encouraging Tolerability in Phase 1 Study With All AEs Being Mild and at Similar Rates as Placebo, With No Discontinuations

SAD Study (n=60)

Adverse Event	ETX-810 (50-1200mg) (n=48*)	Placebo (n=12)
Any AE	29%	33%
Somnolence	10%	8%
Dizziness	8%	0%
Headache	4%	0%
Disorientation	2%	0%
Euphoric mood	2%	0%
Paraesthesia	2%	0%
Nausea	6%	17%
Diarrhoea	2%	0%
Dry mouth	2%	0%
Dyspepsia	0%	8%
Fatigue	2%	17%
Pallor	2%	0%
Palpitations	2%	0%

* same subjects participated in both the 150mg fasted and fed dosing conditions

MAD Study (n=20)

Adverse Event	ETX-810 1000mg BID (n=8)	ETX-810 500mg BID (n=8)	Placebo (n=4)
Any AE	38%	38%	50%
Nausea	25%	0%	25%
Vomiting	0%	0%	25%
Menorrhagia	0%	25%	0%
Dysmenorrhea	0%	13%	0%
Insomnia	0%	13%	0%
Headache	13%	0%	25%
Dizziness	13%	0%	0%
Muscle twitching	13%	0%	0%
Muscle spasms	13%	0%	0%

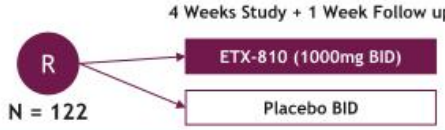
Phase 2 dose

- Participants were dosed every 12 hrs for 6 consecutive days; a single dose was administered on day 7
- All doses were administered following a meal

Highly differentiated Phase 1 tolerability profile for a chronic pain drug

ETX-810: Two Phase 2a Proof of Concept Studies Now Enrolling With Topline Data Expected 1H 2022

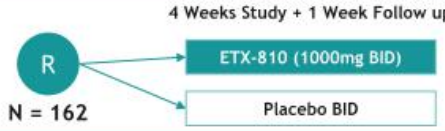
Lumbosacral Radicular Pain (LSRP)



Anticipated topline data 1H 2022

NCT04778592

Diabetic Peripheral Neuropathic Pain (DPNP)



Anticipated topline data 1H 2022

NCT04688671

Objectives:

- Demonstrate clinically meaningful improvement in neuropathic pain
- Confirm safety & tolerability

Primary Outcome Measure:

- Change from baseline to Week 4 in weekly average of the daily pain score
- Rated on 11-point pain intensity numerical rating scale (PI-NRS)
- 80% power to detect a 1-point difference from placebo

Implementing clinical development strategies to refine patient population and limit placebo effect

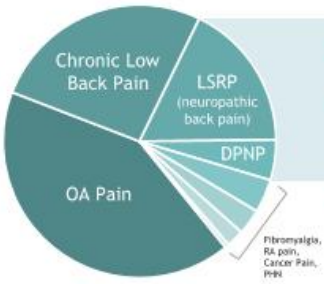
Aiming to Develop a NCE with Desired Clinical Profile to Address the Large Chronic Pain Market

Target Profile for a New Chronic Pain Treatment

- Non-opioid, with no abuse liability
- Novel mechanism of action
- Efficacy as monotherapy and in combination
- Benign side effect profile
- No drug-drug interactions (DDIs)

Commercial Opportunity

2028 US+EU Forecast:
~50m 2nd line or later drug-treated chronic pain patients



- ~10m ≥2nd line treated LSRP and DPNP patients in US+EU
- At ~$5K annual price, every 2% patient market share is worth ~$1b/year in LSRP and DPNP alone
- Broad expansion opportunities into large chronic low back pain and OA pain indications

A novel chronic pain therapy with a desirable product profile is a multibillion dollar opportunity

* Decision Resources Group estimated chronic pain 2028 prevalence by indication, February 2021

ETX-155

Anticipated Milestones

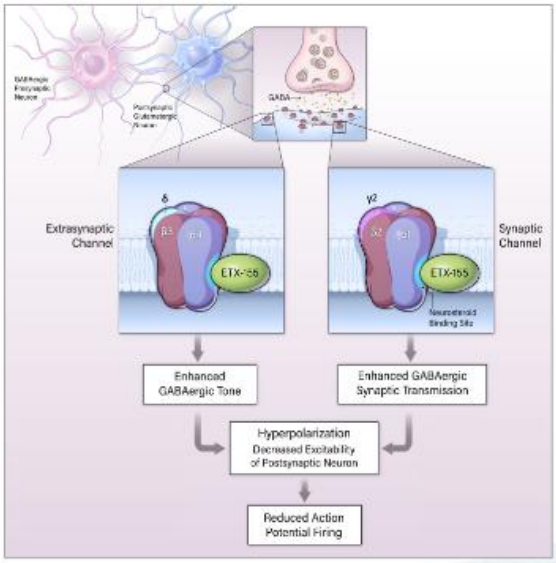
Photosensitive Epilepsy
Data Expected 1H 2022

Major Depressive Disorder
Topline Phase 2a Expected 1H 2023

Perimenopausal Depression
Topline Phase 2a Expected 1H 2023

ETX-155: A Differentiated Neuroactive Steroid $GABA_A$ Positive Allosteric Modulator

- **Clinical validation for MOA ($GABA_A$ PAM)**
- **Dual potent activity at synaptic and extrasynaptic $GABA_A$ receptors**, with high intrinsic efficacy
- **No clinically meaningful food effect**
- Convenient **once-daily dosing with ~40-hr half-life**
- **Well tolerated** at exposure levels that have translated to clinical efficacy for other $GABA_A$ PAMs
- **Strong IP position** with patent protection to 2039



Clinical Development Focused on Depressive Disorders and Focal Onset Seizure – Large Markets With Considerable Unmet Need

	Major Depressive Disorder (MDD)	Perimenopausal Depression (PMD)	Epilepsy / Focal Onset Seizure (FOS)
MoA Rationale	• Reduced GABA levels → increased MDD severity[1] • Clinically validated (SAGE-217)	• Reduced neurosteroid levels → PMD symptoms • Clinically validated in neurosteroid-driven PPD (SAGE-217)	• GABAergic deficits → epileptic state • Clinically validated in orphan epilepsies (ganaxolone)
Unmet Needs	• Faster onset of action • Improved tolerability/efficacy • Novel MoAs	• Same as MDD • Novel MoAs directly addressing reduced neurosteroid levels	• Novel MoAs → better seizure control • Positive impact on mood as #1 comorbidity is depression[4]
Estimated annual prevalence (US+EU)	**~32m** (~9m failed ≥1 prior therapy)[2]	**~8m** (~2m with no history of MDD)[3]	**~2m** (~0.8m with uncontrolled seizures)[5]

1. Luscher et al, *Mol Psychiatry*, 2011;16(4):383-406
2. Decision Resources Group (DRG)- *Unipolar Depression Disease Landscape and Forecast*
3. Freeman et al, *JAMA Psychiatry*, 2014;72(1):36-43
4. Kanner MM, *Biol Psychiatry*, 2003;54(3):388-98
5. DRG – *Epilepsy Disease Landscape and Forecast*, May 2021

ETX-155 Differentiation: Significantly Longer Half-Life, Lack of Food Effect, Favorable Bioavailability and Broad $GABA_AR$ Activity

Company	Molecule	$GABA_AR$ Activity		Pharmacokinetics			Clinical Validation (positive RCT)		
		Synaptic	Extra-synaptic	Food effect	Half-life	Oral Bioavailability	MDD	PPD or PMD	Epilepsy
eliem Therapeutics	ETX-155	✓	✓	No	~40 hrs	~70% (tablet)	1H 2023	1H 2023	2024
Sage Therapeutics	SAGE-217 (zuranolone)	✓	✓	Yes	14-18 hrs	68% (capsule)	✓	✓	-
MARINUS PHARMACEUTICALS	ganaxolone	✓	✓	Yes	2-3 hrs	10% (capsule)	-	-	✓
PRAXIS	PRAX-114	✗	✓	Yes	12-15 hrs	Not disclosed	1H 2022	TBD	-

Sources:
SAGE-217: Hoffmann et al., *Clin Pharmacokinet*, 2020;59(1):111-120; Hoffmann et al., ASCP 2018, poster #782; Botella et al., *J Med Chem*, 2017;60(18)7810-7819.
PRAX-114: Praxis Precision Medicines. 2020 Form S-1 Registration Statement
Ganaxolone: Hulihan et al., American Epilepsy Society Annual Meeting 2020, poster

RCT: randomized, controlled clinical trial
PPD: Postpartum Depression; MDD: Major Depressive Disorder; PMD: Perimenopausal Depression; PTSD: Post-Traumatic Stress Disorder; ET: Essential Tremor

Phase 1 Study in Healthy Subjects: Excellent Pharmacokinetics and Safety & Tolerability Profile with No Severe or Serious Adverse Events

Most common treatment-emergent AEs

(In ≥10% of ETX-155 treated subjects across repeat dose studies)

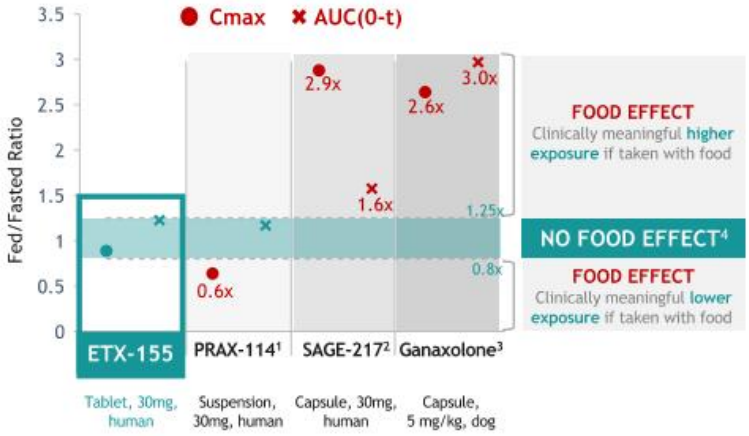
	7-day Repeat Dose		14-day Repeat Dose		Combined	
	ETX-155 60 mg (n=9)	Placebo (n=6)	ETX-155 60 mg (n=15)	Placebo (n=5)	ETX-155 60 mg (n=24)	Placebo (n=11)
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
≥1 TEAE	**5 (56)**	3 (50)	**9 (60)**	4 (80)	**14 (58)**	7 (64)
Somnolence	**1 (11)**	2 (33)	**6 (40)**	2 (40)	**7 (29)**	4 (36)
Fatigue	**0**	0	**4 (27)**	1 (20)	**4 (17)**	1 (9)
Headache	**2 (22)**	2 (33)	**1 (7)**	0	**3 (13)**	2 (18)
Dizziness	**1 (11)**	0	**2 (13)**	0	**3 (13)**	0

ETX-155 Phase 1 Repeat-Dose Results

- **Favorable pharmacokinetics**
  - Steady state reached at day 8
  - ~40-hour half-life at steady state
- **60 mg evening dosing was well tolerated**
  - **No SAEs or discontinuations**
  - **All AEs were mild/moderate** and transient
- **CNS AE details**
  - **The rate of CNS AEs were comparable in ETX-155 and placebo groups**
  - Most CNS AEs occurred at Tmax (3-4 hrs post-dose)
  - **7 reports of somnolence** out of 24 ETX-155-treated patients (**no subject reported somnolence more than once** during dosing period)
  - Leeds Sleep Evaluation Questionnaire indicates **no difference in next-morning alertness or disruption in sleep quality** compared to placebo

ETX-155 Does Not Have a Clinically Meaningful Food Effect: Potential to Impact Efficacy, Safety, and Compliance

Reported Fed/Fasted Ratios for $GABA_A$ PAM class



Presence of a food effect may impact:

Efficacy
Exposure reduced or increased if medication not taken with food

Safety and Tolerability
Timing/severity of AEs associated with Cmax

Compliance
More strict daily routine required to maintain drug levels within the required range for efficacy and safety

1. Praxis Precision Medicines, Form S-1/A, Oct 15, 2020
2. Hoffmann et al. Clin Pharmacokinet. 2020;59(1):111-120; Hoffmann et al. ASCP 2018, poster #782
3. U.S. Patent No. 9,029,395
4. Range of fed/fasted ratios for AUC and Cmax required to claim absence of food effect on bioavailability, per FDA Guidance For Industry, Food-Effect Bioavailability and Fed Bioequivalence Studies, December 2002

ETX-155 has not been assessed in a head-to-head study against PRAX-114, SAGE-217, or ganaxolone, and the study designs and analytical methods for all four product candidates may be different. As a result, such data may not be directly comparable.

Progressing ETX-155 in Epilepsy: Phase 1b Proof-of-Concept Trial in Photosensitive Epilepsy (PSE) to De-risk Focal Onset Seizure Study

Rationale

- PSE is characterized by a **photoparoxysmal response (PPR)** triggered by light stimulation
- Single dose PSE trials are valuable in predicting efficacy in epilepsy and aiding in dose selection for later phase trials
- Reduction of an induced PPR EEG response in PSE has proven a **reliable biomarker of anticonvulsant activity** in epilepsy for most approved ASMs[1]

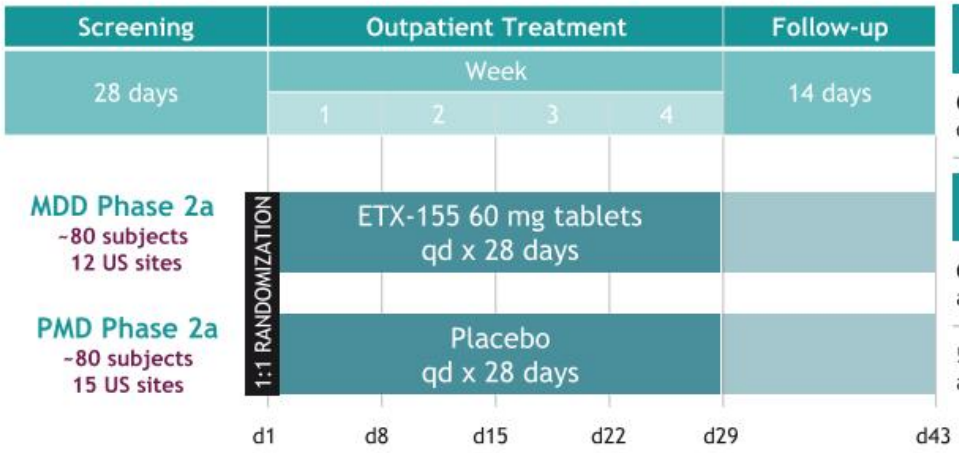
Study Details

- **Design:** Phase 1b, single-center, randomized, double-blind, placebo-controlled, 2-sequence crossover study
- **Objective:** Provide evidence of inhibition of PPR in subjects with PSE
- **Dose:** Single dose of 135 mg (MTD), then titrate down until loss of effect
- **N= 6**
- **Primary Outcome Measure:** Change in PPR range vs placebo at 1, 2, 4, 6, and 8hr

Data anticipated 1H 2022

1. Yuen and Sims, *Seizure*, 2014, 23:490-493

Progressing ETX-155 in Depressive Disorders: Two Phase 2a RCTs of ETX-155 in MDD and PMD, with Topline Data Anticipated in 1H 2023



Primary Endpoint
(both PMD and MDD studies)

Change from baseline in HAMD17
over days 8, 15, 22, and 29*

Key Secondary Endpoints

Change from baseline in HAMD17
at day 8, 15, 22, 29, and 43*

50% response rate in HAMD17
at day 8, 15, 22, 29*

Topline data from both studies anticipated 1H 2023

* Evaluating additional HAMD measurement at Day 3.

HAMD17: Hamilton Depression Rating Scale

ETX-155: Potentially Clinically Differentiated Oral Neuroactive Steroid in Markets with Significant Unmet Needs

Unmet Needs

Depressive Disorders

Slow onset of efficacy (~6+ wks)

High refractory rates

Tolerability issues limit compliance

Focal Onset Seizure

30% of patients on ASMs have uncontrolled seizures

#1 co-morbidity is depression

ETX-155 Opportunities

Improve Efficacy

Leverage absence of food effect & significantly longer half-life

Improve Tolerability

Highly encouraging CNS AE rates in healthy subjects

Improve Durability

Leverage longer half-life and evaluate longer dosing periods (i.e., ≥28 days)

Novel MoA

Clinicians combine different MoAs to improve seizure control

Well Tolerated

Encouraging Phase 1 tolerability data when considering use as an add-on therapy

Positive impact on mood

Potential to provide differentiated benefit on common depression comorbidity

Kv7.2/3 Program: Developing a Differentiated Kv7.2/3 Opener For Multiple Neuronal Excitability Indications

Kv7 Opportunity

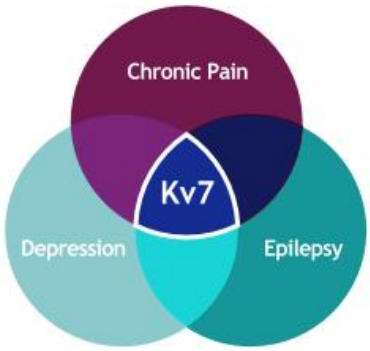
- Human genetic validation
- Strong clinical validation in pain and epilepsy (retigabine, flupirtine, XEN1101)
- Metabolic/safety liabilities with existing molecules
- Clear translational path to clinical efficacy

Eliem Kv7 Program Goal

Maintain efficacy with improved tolerability and safety

Program Status

- Multiple lead and backup chemotypes in novel IP space
- Improved metabolic stability
- Potent at Kv7.2/3 and selective vs Kv7.1/4



Opportunity across multiple indication areas

IND-enabling studies anticipated to initiate 1H 2022

Multiple Catalysts and Value-Creating Milestones Across Pipeline – Existing Cash Runway Through Five Topline Data Catalysts

Financial Summary

Cash, Cash Equivalents & Marketable Securities

$169.6 million

As of Sept 30, 2021

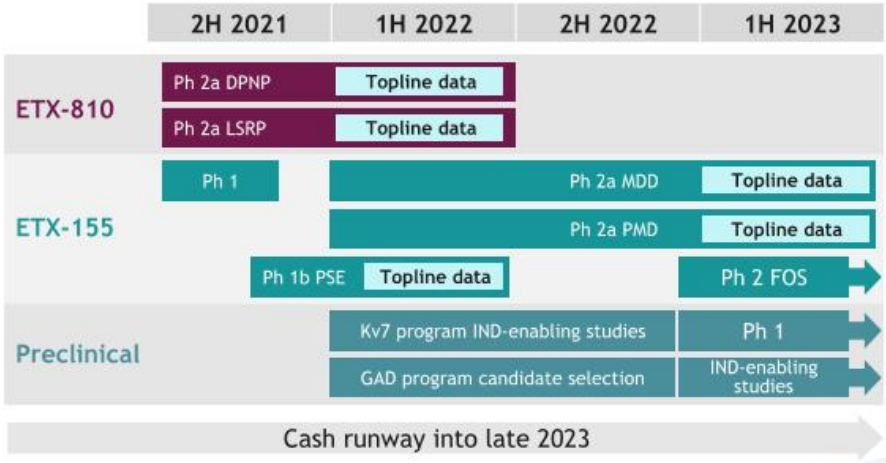
Q3 2021 Operating Expenses

$9.4 million

R&D: $6.0 million

G&A: $3.4 million

Anticipated Catalysts and Key Milestones



Rethinking treatment for nervous system disorders

- **Highly experienced** management team
- **Clinical and preclinical pipeline** based on clinically validated mechanisms of action
- Two clinically differentiated lead product candidates with **top-line data readouts across five indications over next 24 months**
- **~$170M* cash runway to late 2023** allows for top line data readouts and advancement of preclinical assets

* Cash, cash equivalents and marketable securities as of September 30, 2021

eliem Therapeutics

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