H.C. Wainwright 22nd Annual Global Investment Conference

SEPTEMBER 16, 2020

NASDAQ: EYPT

EYEPOINT PHARMACEUTICALS

FORWARD LOOKING

Various statements made in this presentation are forward-looking, and are inherently subject to risks, uncertainties and potentially inaccurate assumptions. All statements that address activities, events or developments that we intend, expect, plan or believe may occur in the future, including but not limited to statements about our expectations regarding the potential benefits of our partnerships and strategic alliances with other companies, as well as the timing and clinical development of our product candidates, including EYP-1901; and the potential for EYP-1901 as a vital, novel six-month treatment for serious eye diseases, including wet age-related macular degeneration, diabetic retinopathy and retinal vein occlusion; and our longer term financial and business goals, are forward-looking statements. Some of the factors that could cause actual results to differ materially from the anticipated results or other expectations expressed, anticipated or implied in our forward-looking statements are risks and uncertainties inherent in our business including, without limitation: the extent to which COVID-19 impacts our business; the effectiveness and timeliness of clinical trials, and the usefulness of the data; the timeliness of regulatory approvals; our ability to achieve profitable operations and access to needed capital; fluctuations in our operating results; our ability to successfully produce sufficient commercial quantities of YUTIQ and DEXYCU and to successfully commercialize YUTIQ and DEXYCU in the U.S.; our ability to sustain and enhance an effective commercial infrastructure and enter into and maintain commercial agreements for YUTIQ and DEXYCU; the development of our YUTIQ line extension shorter-duration treatment for non-infectious uveitis affecting the posterior segment of the eye; potential off-label sales of ILUVIEN for non-infectious uveitis affecting the posterior segment of the eye; consequences of fluocinolone acetonide side effects for YUTIQ; consequences of dexamethasone side effects for DEXYCU; successful commercialization of, and receipt of revenues from, ILUVIEN for diabetic macular edema, or DME; Alimera's ability to obtain additional marketing approvals and the effect of pricing and reimbursement decisions on sales of ILUVIEN for DME; Alimera's ability to commercialize ILUVIEN for non-infectious uveitis affecting the posterior segment of the eye in the territories in which Alimera is licensed to do so; our ability to market and sell products; the success of current and future license agreements, including our agreement with Equinox Science; termination or breach of current license agreements, including our agreement with Equinox Science; our dependence on contract research organizations, contract sales organizations, vendors and investigators; effects of competition and other developments affecting sales of products; market acceptance of products; effects of guidelines, recommendations and studies; protection of intellectual property and avoiding intellectual property infringement; retention of key personnel; product liability; industry consolidation; compliance with environmental laws; manufacturing risks; risks and costs of international business operations; volatility of our stock price; possible dilution; absence of dividends; and other factors described in our filings with the Securities and Exchange Commission. We cannot guarantee that the results and other expectations expressed, anticipated or implied in any forward-looking statement will be realized. A variety of factors, including these risks, could cause our actual results and other expectations to differ materially from the anticipated results or other expectations expressed, anticipated or implied in our forward-looking statements. Should known or unknown risks materialize, or should underlying assumptions prove inaccurate, actual results could differ materially from past results and those anticipated, estimated or projected in the forward-looking statements. You should bear this in mind as you consider any forward-looking statements. Our forward-looking statements speak only as of the dates on which they are made. We do not undertake any obligation to publicly update or revise our forward-looking statements even if experience or future changes makes it clear that any projected results expressed or implied in such statements will not be realized.

COMPANY OVERVIEW

EYEPOINT PHARMACEUTICALS

Ocular Disease Focus	Compelling Pipeline	Commercial Revenue	Validated Technology
Portfolio of commercial- and clinical-stage assets targeting attractive areas of unmet need in ocular diseases	Includes EYP-1901 a potential six-month sustained release anti-VEGF treatment for wet age-related macular degeneration positioned for IND filing in Q4 2020	Customer demand for YUTIQ® and DEXYCU® franchises trending positive as the U.S. emerges from COVID-19 shut-downs	Durasert® sustained-release technology has broad application across both internal programs and external partnerships

~$33M Cash at August 31, 2020

OCULAR DISEASE FOCUSED PIPELINE

EyePoint Pharmaceuticals

Program	Preclin.	Phase 1	Phase 2	Phase 3	Commercial	Rights
DEXYCU® post-operative inflammation following ocular surgery						WW[2]
YUTIQ® - three-year treatment for chronic non-infectious uveitis affecting the posterior segment						U.S.[1,2]
YUTIQ® 50 short duration treatment for chronic non-infectious uveitis affecting the posterior segment						WW
EYP-1901 – six-month anti-VEGF treatment for wet AMD						WW[3]

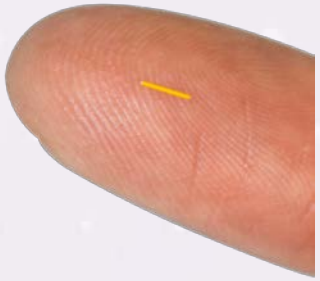
Durasert® Partners	Preclin.	Phase 1	Phase 2	Phase 3	Commercial
ILUVIEN/Alimera Sciences – DME					
Undisclosed – Ophthalmology					
Undisclosed - Non-ophthalmology					
Undisclosed - Other small molecule					

[1] Alimera Sciences, Inc. owns worldwide rights to ILUVIEN® for DME and rights for YUTIQ® for non-infectious posterior uveitis in the EMEA with a royalty payable to EyePoint.
[2] Rights for China, Hong Kong, Taiwan, Macau , Korea and certain SE Asia countries licensed to Ocumension with a royalty on sales payable to EyePoint
[3] Excludes China, Hong Kong, Taiwan and Macau

Durasert® Technology

DURASERT® - Proven Sustained Release Delivery

Four FDA-Approved Products with Multiple Programs in Development



- Sustained-release delivery of small molecule drugs to the back of the eye
- Release profile allows design of treatment duration from months to years
- Administration during Physician office visit

Approved products[1]/Indications:

- YUTIQ® (2018, EyePoint) - *Posterior Segment Uveitis*
- ILUVIEN® (2014, Alimera) - *DME*
- RETISERT ® (2005, B&L) - *Uveitis*
- VITRASERT® (1996, B&L) - *CMV retinitis*

Development Candidates:

- EYP-1901[2] (EyePoint) – Wet AMD
- YUTIQ® 50[1] (EyePoint) - *Posterior Segment Uveitis*
- Partner programs

[1] Durasert® non-erodible technology
[2] Durasert® bioerodible technology

EYP 1901 - Six-Month Sustained-Release Anti-VEGF Product Candidate

Opportunity in Wet AMD, Diabetic Retinopathy, and Retinal Vein Occlusion

EyePoint Pharmaceuticals

WET AMD MARKET OPPORTUNITY

$7.9B Worldwide Therapeutic Market

- No cure for wet AMD
- Frequent intravitreal injections of anti-VEGF agents required up to 12 times annually to maintain vision
- Strong demand for durable and sustained delivery option
  - Reduce frequency of injections
  - Improved visual outcomes

Holz FG, et al. Br J Ophthalmol 2015;99:220–226
Lotery A et all, Eye (2017) 31, 1697–1706

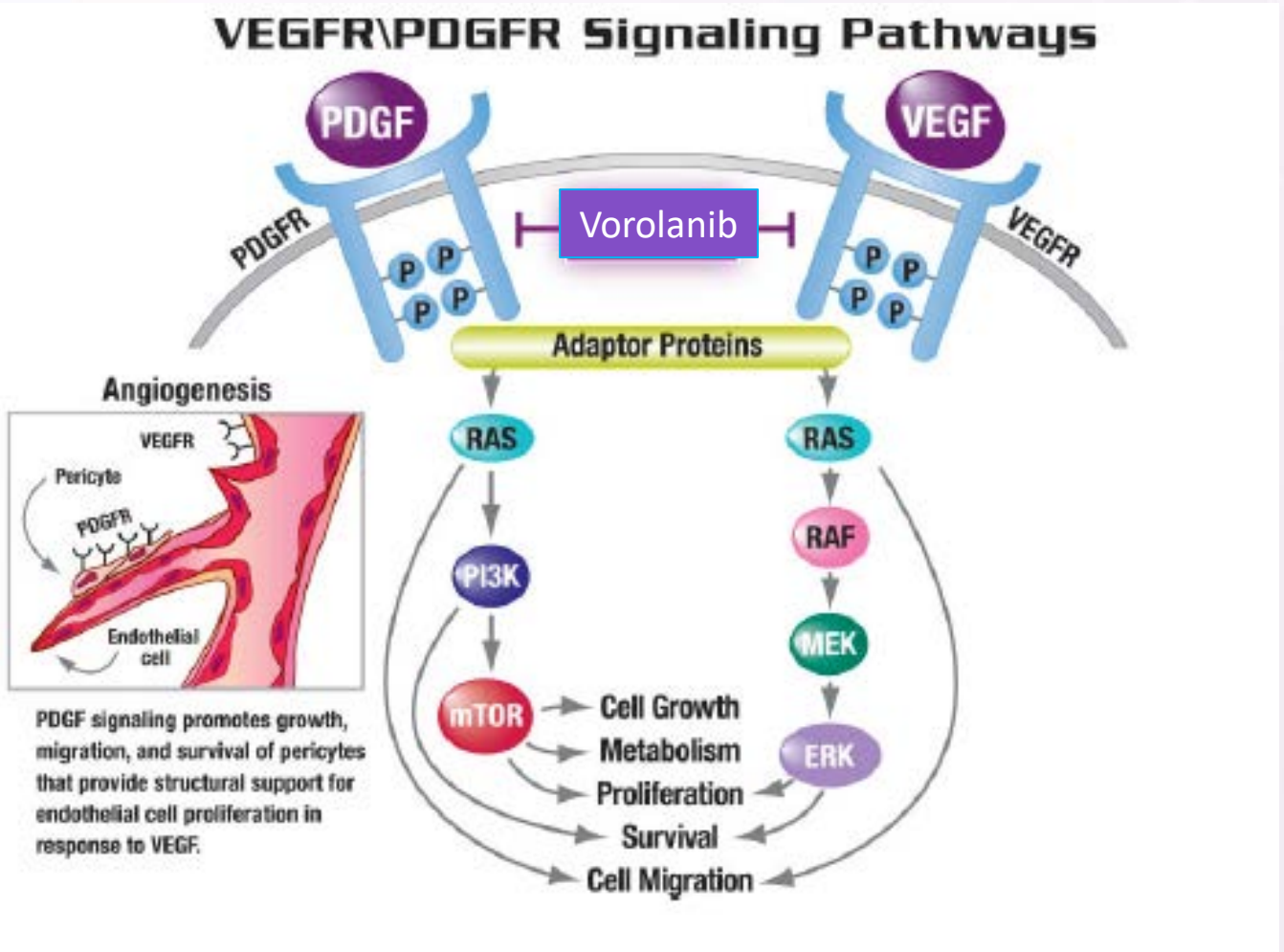
EYP-1901
Product Candidate Overview

- Anti-VEGF intravitreal therapy with sustained, consistent delivery of drug over at least 6 months. Initial clinical target – wet AMD
- Utilizes Durasert technology and an anti-VEGF small molecule, vorolanib – a tyrosine kinase inhibitor (TKI)
- Vorolanib previously studied as an oral agent for wet AMD through Phase 2, Strong efficacy signal and no significant ocular adverse events
- Efficacy and preliminary safety study completed in a laser CNV mini pig model with low doses of EYP-1901 Results: dose-related efficacy and no clinically observed toxicity

  Non-GLP rabbit PK and safety study of EYP-1901 demonstrate drug levels in vitreous and retina/choroid significantly above the IC50 for VEGFR

  GLP toxicology program underway with 6-month data expected in October 2020
- IND filing on track for Q4 2020

EYP-1901
Vorolanib– Mechanism of Action at Receptor



EYP-1901
Vorolanib Background

EyePoint Pharmaceuticals

IC50 Data Compared to Sunitinib

Biochemical Selectivity (IC50 in µM)		
ID	VEGFR	PDGFR
Sunitinib	0.043	0.16
Vorolanib	0.052	0.26
Biochemical Selectivity (IC50, ng/g)		
Sunitinib	22.9	85.1
Vorolanib	22.9	114.3

The most important targets of ocular neovascularization are strongly inhibited by vorolanib and sunitinib with comparable IC50 values

The inhibition constant of sunitinib for VEGFR (Ki) is reported to be low (5 ng/g), an indication on strong inhibition.
Since Ki is related to IC50, similar inhibition (Ki) is expected for vorolanib

EYP-1901 – Vorolanib History
Phase 1 Clinical Trial –Oral Delivery

Phase 1 Trial – open label, 24 weeks, dose escalation, no control, oral delivery. 80 % of eyes enrolled previously treated. 4 eyes treatment naïve.

Visual Acuity (BCVA)	Anti—VEGF Rescue Injections	Central Retinal Thickness
Despite low retreatment rates, BCVA was maintained to within 4 letters of baseline at the 24-week endpoint, or improved in all but 1 participant Mean change was +3.8 +/- 9.6 letters (n=25 completers)	60% of patients (15 of 25) required no rescue injections while on 24-week study Mean time to the first rescue injection was 130 days in the 10 participants who completed the study and required an injection	Mean OCT thickness in completers was reduced by -50 +/- 97 µm Mean OCT thickness in treatment-naïve patients was reduced by ~80 µm

X-82 is the oral dosage form of vorolanib used in previous Phase 1 trial completed by Tyrogenix, Inc.

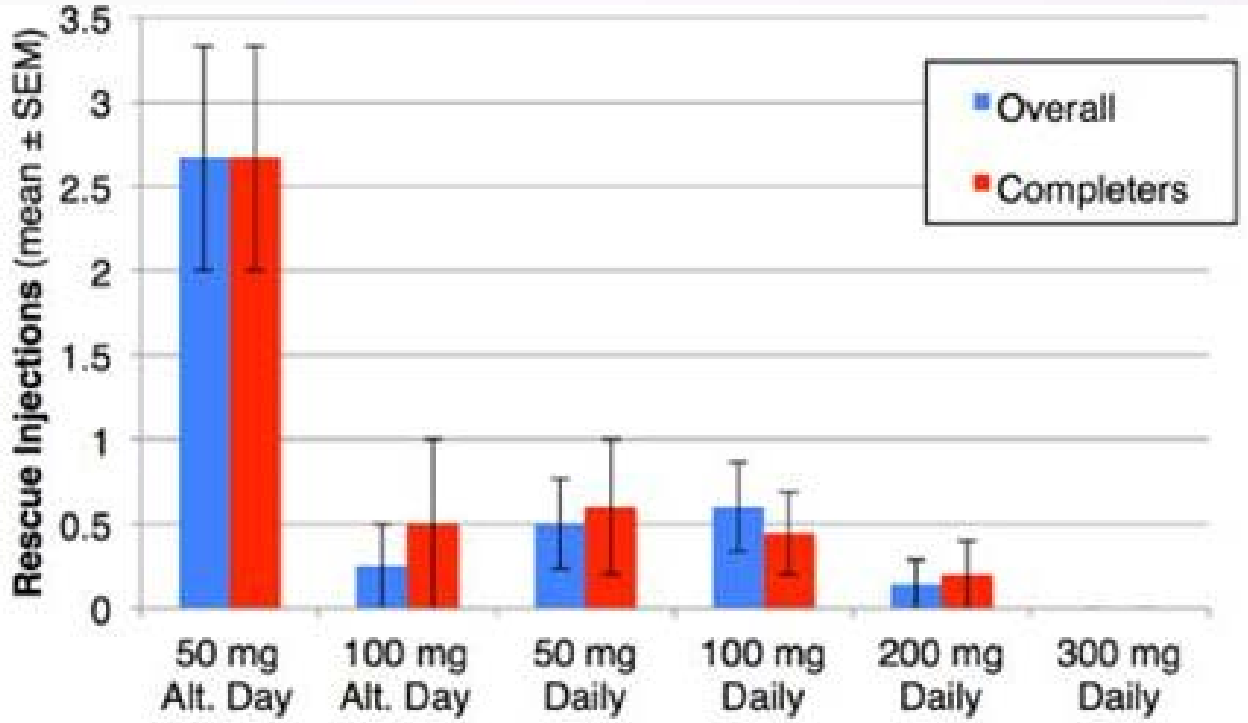
[1]Jackson TL et al. JAMA Ophthalmology July 2017 Volume 135, Number 7, 2017

EYP-1901 – Vorolanib History
Phase 1 Clinical Trial –Oral Delivery

EyePoint Pharmaceuticals

Phase 1 Trial - Rescue Injections

25 of 35 completed at the 6 Mo Follow up



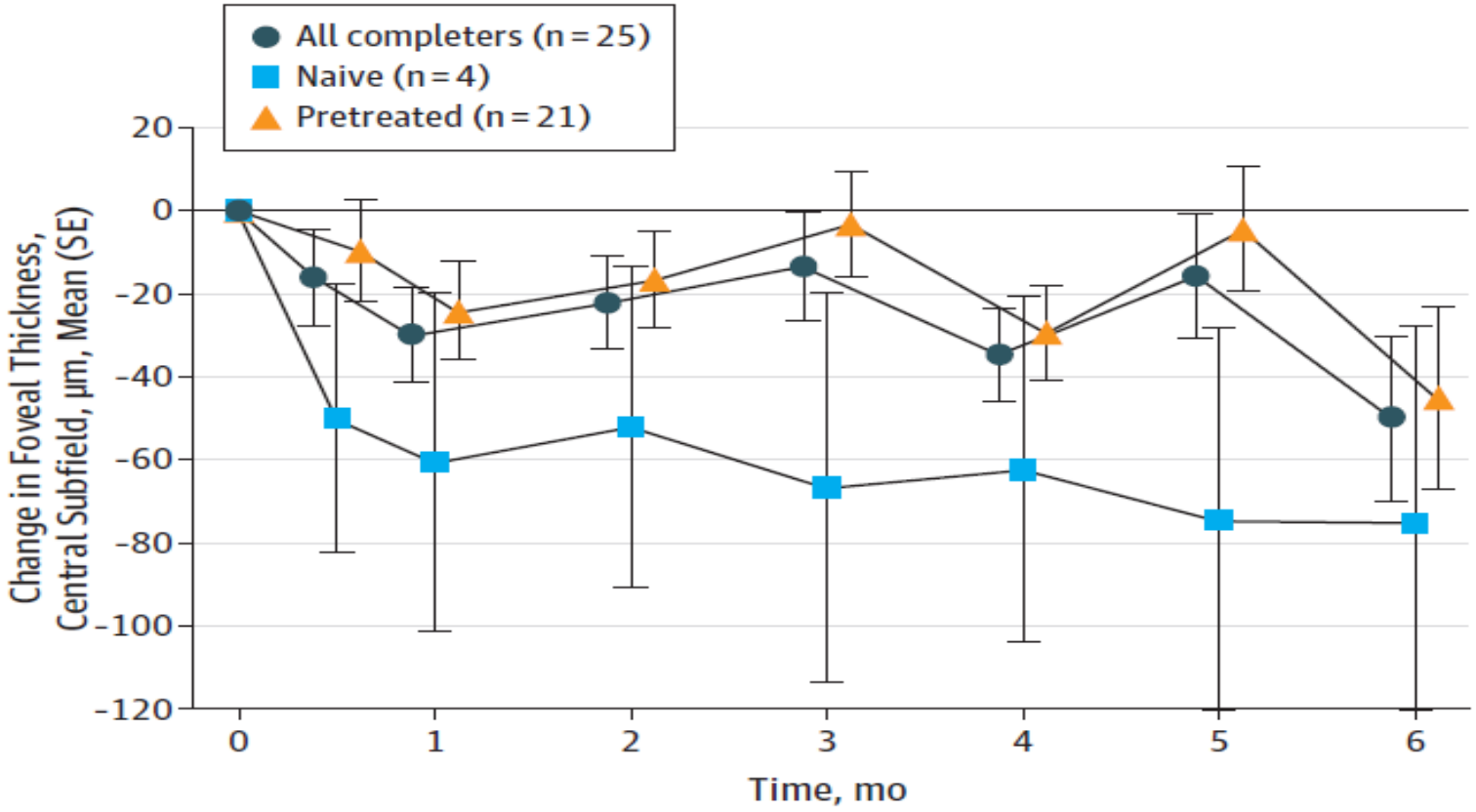
- Anti-VEGF Rescue Injections:
  - **60% of patients (15 out of 25) required no injections while on X-82**
  - Mean number of injections in participants that completed was 0.68
    - 4 patients required just one injection, and 1 required two injections
    - No patients required more than two injections during the six-month period

- The graphs shows the mean number of intravitreal anti-vascular endothelial growth factor (VEGF) rescue injections that participants required in each of the X-82 groups.
- The completers' group (red) comprises the 25 participants who reached the 24 week endpoint, and the overall group (blue) comprises all 35 participants.

EYP-1901 – Vorolanib History
Phase 1 Clinical Trial –Oral Delivery

EyePoint Pharmaceuticals

Phase 1 Trial - Change in CST from Baseline through Week 24



Optical coherence tomography central subfield thickness for all participants who completed the 24 weeks of dosing. Thickness decreased somewhat overall as compared with baseline measurements, most notably in the treatment naive patients. Graph shows the mean (SEM).

EYP-1901 – Vorolanib History
Phase 2 Clinical Study – Oral Delivery

EyePoint Pharmaceuticals

Phase 2b Trial (Apex) in wAMD – Oral Administration - Number of Anti-VEGF Injections

Pre-defined rescue criteria with intravitreal anti-VEGF therapy

- Any increase in fluid on OCT compared to Screening Visit 2 (~14 days after an IVT injection)
- New or increased macular hemorrhage by fundus photography
- Double masked study – investigators unaware of treatment v control

For subjects followed ≥ 6 months, number of anti-VEGF injections per year*	Placebo n=33	50 mg n=34	100 mg n=30	200 mg n=26
Median	9.0	6.1	5.8	4.6
Number of Patients w/ no rescue	2.6%	7.5%	10.3%	20.5%

Less rescue vs placebo for all doses. Numerically smallest for 200 mg dose (~118 ng/g SS). No ocular tox.

*Normalized for number of months on study.
Study completed by Tyrogenex, Inc.

EYP-1901
Phase 1 Study Plan

Approximately 20 patients
with wet AMD responsive to previous anti-VEGF therapy enrolled in US sites

Open label, dose-escalation, no control (results to be monitored on an ongoing basis)

Primary endpoint - safety (AE rates and severity); BCVA and central subfield thickness secondary

Three dose levels. Follow up though 12 months (6-month timepoint is key readout)

EYP-1901 dosed 1-2 weeks following the last anti-VEGF injection

Rescue with anti-VEGF's if necessary according to industry standard clinical criteria

Planned expansion with additional patients to provide additional efficacy and safety data

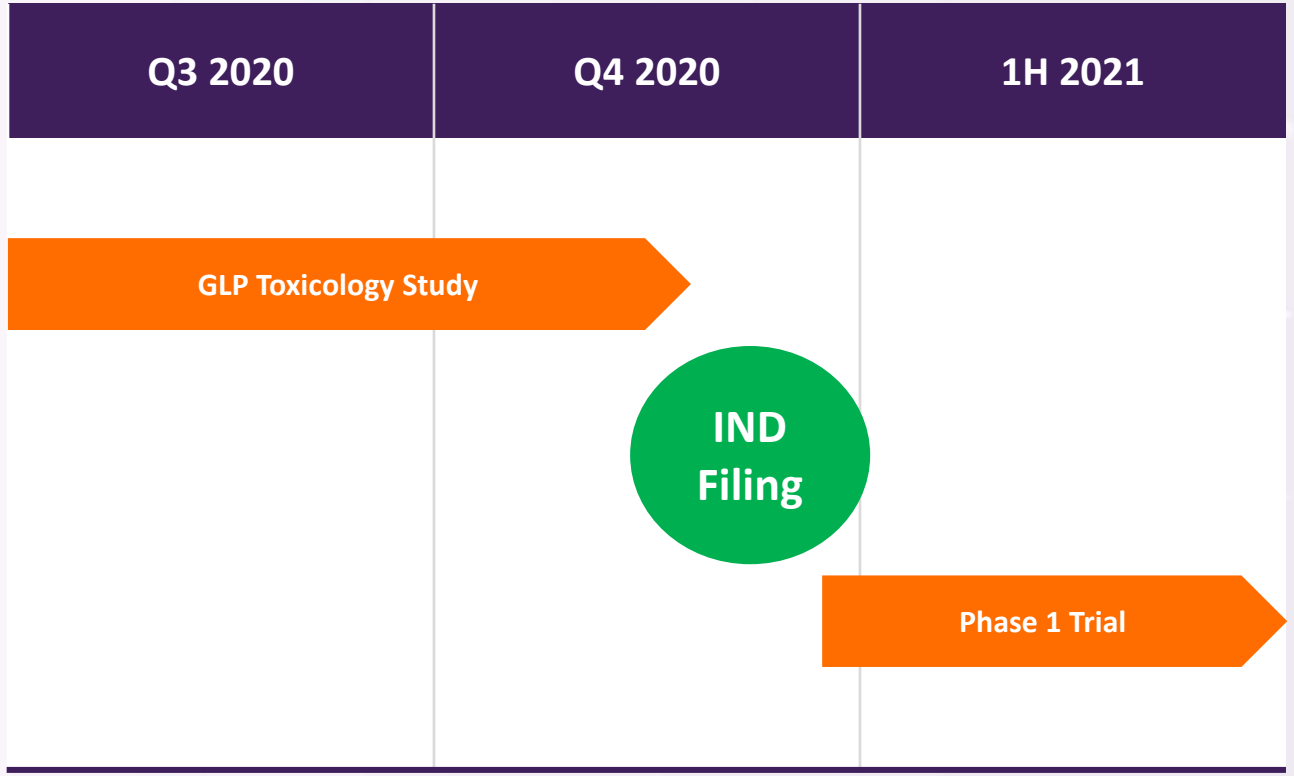
EYP-1901 - Next Steps and Development Plan

Type B Pre-IND meeting with FDA in January 2020

GLP toxicology study initiated in March 2020–unaffected by COVID-19 shut-downs

IND filing in Q4 2020 with Phase 1 initiation to follow

Initial data expected in 2H of 2021



Commercial Programs

EYEPOINT PHARMACEUTICALS

EyePoint Pharmaceuticals

0.18 mg YUTIQ™ (fluocinolone acetonide intravitreal implant) 0.18 mg

Chronic non-infectious uveitis affecting the posterior segment of the eye

- Addresses limitations of short-acting standard of cares to decrease uveitis flares
- Permanent and specific J-Code

DEXYCU® (dexamethasone intraocular suspension) 9%

Postoperative inflammation following ocular surgery

- Single long-lasting treatment compared with complicated eyedrop regimen
- Permanent and specific J-Code with solid reimbursement experience
- Co-Promotion with ImprimisRX in place for U.S. market

YUTIQ® - 3 YEAR TREATMENT FOR CHRONIC NONINFECTIOUS UVEITIS

EyePoint Pharmaceuticals

Market Potential

~60K–100K

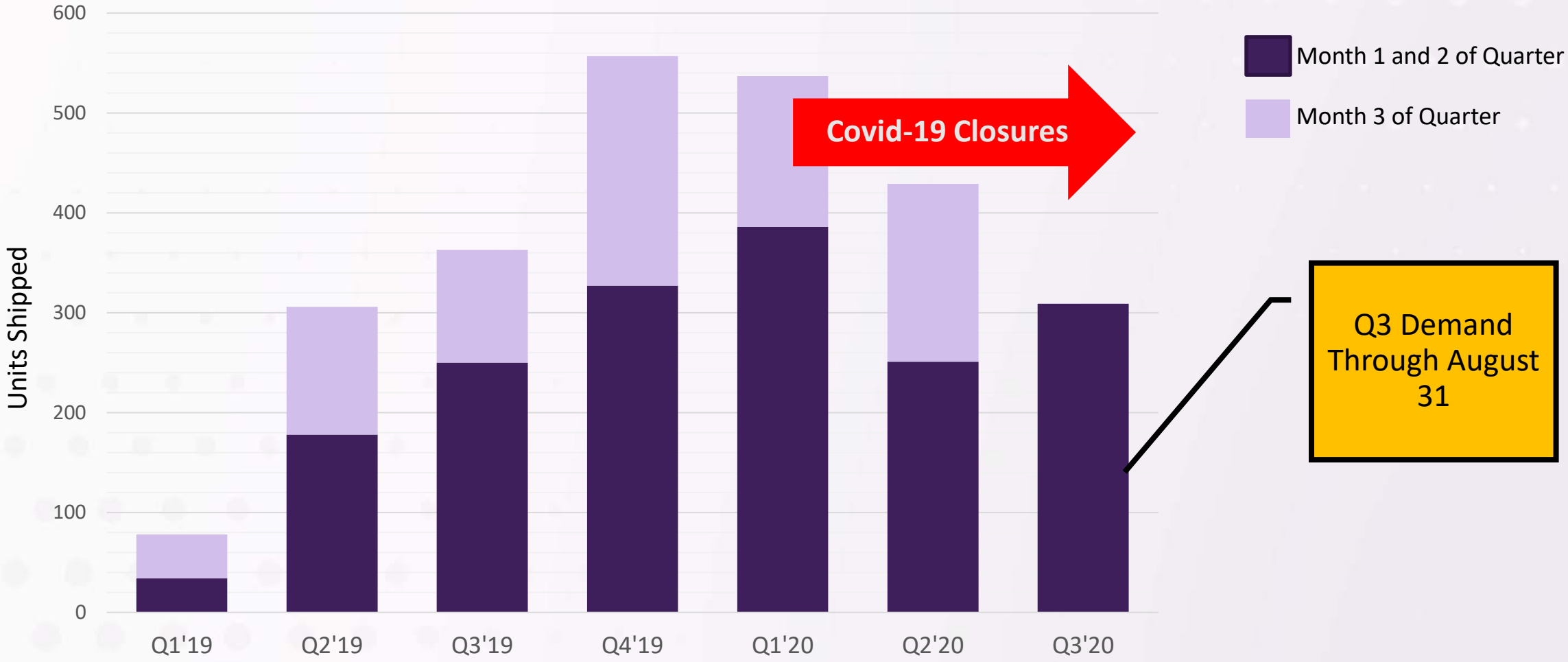
Patients in the U.S. with Chronic Non-infectious Posterior Segment Uveitis

- ~30,000 new cases of blindness per year in the U.S.
- 3rd leading cause of blindness in the U.S.

Patient Experience

- Noninfectious uveitis is inflammation of the uveal tract and adjacent structures
- Spontaneous and uncontrolled uveitic flares can lead to severe vision loss or blindness
- Disease is often lifelong and YUTIQ provides an effective three-year treatment option

YUTIQ Customer Demand Quarterly Trend



Q3'20 data through August 2020

DEXYCU®
CATARACT SURGERY MARKET

U.S. Cataract Surgery Large and Growing

3.8 Million*

Cataract Surgeries in 2018

- 8% annual growth rate in the U.S.
- Most performed surgery in the U.S.

Baby boomers; longer life expectancy with greater access to healthcare

Improvements in technology

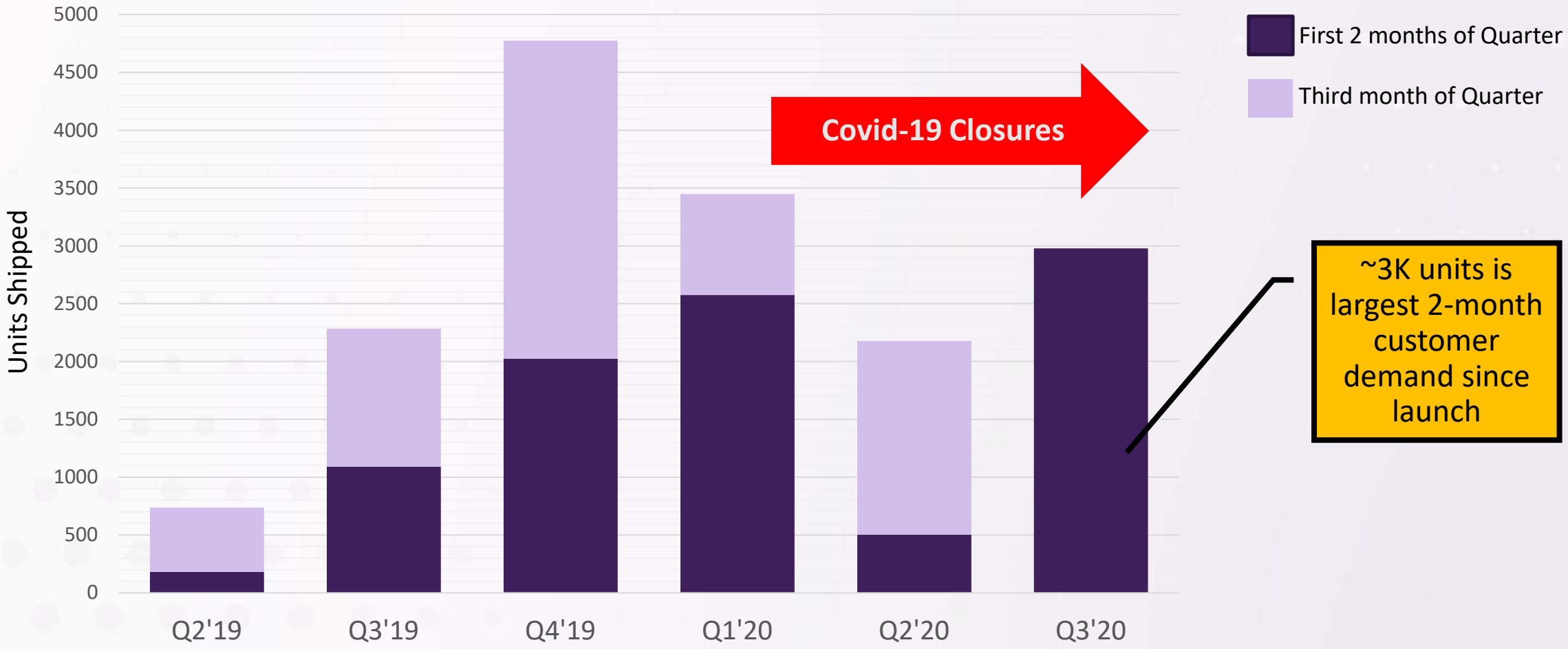
Improved outcomes

Physician Perspective

- Poor patient compliance with drop regimen can lead to **poor outcomes**
- Patient call backs are time consuming and **disruptive to physician office**
- Patients/caregivers are **frustrated and confused with regimen**

* Based upon company estimates for 2018.
Source: imaged from the American Optometric Association.

DEXYCU Customer Demand Quarterly Trend



Q3'20 data through end of August

DEXYCU - EXPANDING PRODUCT REACH

- ImprimisRX - Commercial Alliance, August 2020
- Focus on volume-based agreements with ambulatory surgical centers and integrated healthcare networks
- Latest strategic purchase and marketing agreement secured with Vantage Outsourcing in August 2020

One of Largest Integrated Delivery Systems in the U.S.

vizient™

COMPANY OVERVIEW

EyePoint Pharmaceuticals

Ocular Disease Focus	Compelling Pipeline	Commercial Revenue	Validated Technology
Portfolio of commercial- and clinical-stage assets targeting attractive areas of unmet need in ocular diseases	Includes EYP-1901 a potential six-month sustained release anti-VEGF treatment for wet age-related macular degeneration positioned for IND filing in Q4 2020	Customer demand for YUTIQ® and DEXYCU® franchises trending positive as the U.S. emerges from COVID-19 shut-downs	Durasert® sustained-release technology has broad application across both internal programs and external partnerships