ANTONY MATTESSICH, MD
PRESIDENT AND CEO
OCTOBER 2019

OPHTHALMOLOGY INNOVATION SUMMIT

(NASDAQ: OCUL)
TRANSFORMING
DRUG DELIVERY
LEVERAGING A NOVEL TECHNOLOGY PLATFORM

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FORWARD LOOKING STATEMENTS

Any statements in this presentation about future expectations, plans and prospects for the Company, including the commercialization of DEXTENZA®, ReSure® Sealant, or any of the Company’s product candidates, the development and regulatory status of the Company’s product candidates, such as the Company’s regulatory submissions for and the timing and conduct of, or implications of results from, clinical trials of, and the prospects of approvability for, DEXTENZA for any additional indications, OTX-TP for the treatment of primary open-angle glaucoma and ocular hypertension, OTX-TIC for the treatment of primary open-angle glaucoma and ocular hypertension, OTX-TKI for the treatment of retinal diseases including wet AMD, and OTX-IVT as an extended-delivery formulation of the VEGF trap aflibercept for the treatment of retinal diseases including wet AMD; the Company’s post-approval studies of ReSure Sealant; the ongoing development of the Company’s extended-delivery hydrogel depot technology; the potential utility or commercial potential of any of the Company’s product candidates; the potential benefits and future operation of the collaboration with Regeneron Pharmaceuticals, including any potential future payments thereunder; the sufficiency of the Company’s cash resources and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "goal," "may," "might," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors. Such forward-looking statements involve substantial risks and uncertainties that could cause the Company’s clinical development programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, those related to the timing and costs involved in commercializing DEXTENZA, ReSure Sealant or any product candidate that receives regulatory approval, including the conduct of post-approval studies, the ability to retain regulatory approval of DEXTENZA, ReSure Sealant or any product candidate that receives regulatory approval, the ability to maintain reimbursement codes for DEXTENZA, the initiation, timing and conduct of clinical trials, availability of data from clinical trials and expectations for regulatory submissions and approvals, the Company’s scientific approach and general development progress, the availability or commercial potential of the Company’s product candidates, the sufficiency of cash resources, the Company’s existing indebtedness, the ability of the Company’s creditors to accelerate the maturity of such indebtedness upon the occurrence of certain events of default, the outcome of the Company’s ongoing legal proceedings and need for additional financing or other actions and other factors discussed in the “Risk Factors” section contained in the Company’s quarterly and annual reports on file with the Securities and Exchange Commission. In addition, the forward-looking statements included in this presentation represent the Company's views as of the date of this presentation. The Company anticipates that subsequent events and developments will cause the Company’s views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so except as required by law. These forward-looking statements should not be relied upon as representing the Company’s views as of any date subsequent to the date of this presentation.
POSITIONED TO DEVELOP BREAKTHROUGH TREATMENTS

WE BELIEVE THE APPROVAL OF DEXTENZA® IS ONLY THE BEGINNING

Provide unique drug delivery to the surface and anterior segment of the eye.

Leverage the hydrogel platform

Enable new delivery modalities for breakthrough technologies.

Obsolete immediate release injections

Obsolete drop therapies

Develop sustained release injections for the posterior segment of the eye.
ADHERENCE FOR PATIENTS WITH GLAUCOMA IS PROBLEMATIC

POOR ADHERENCE HAS BEEN SHOWN TO BE ASSOCIATED WITH DISEASE PROGRESSION AND BLINDNESS

- The primary goal of glaucoma treatment is to reduce intraocular pressure
- Various medications can significantly lower intraocular pressure and reduce the progression of glaucoma, but these are almost always life-long medications that must be taken on a daily basis
- Adherence to glaucoma therapies is particularly poor, with reported rates of non-adherence ranging from 30–80%\(^2,3,4\)
- Poor adherence has been shown to be associated with disease progression and blindness\(^5,6\)
- The molecules are effective but the delivery is flawed

OTX-TP DELIVERS TRAVOPROST FOR ~90 DAYS WITH A SINGLE INSERTION

**OTX-TP** (travoprost insert) for intracanalicular use

**Sustained zero-order release for up to 90 days**
- Little to no hyperemia (red eye) and less staining of the skin
- Less diurnal IOP variation
- Occlusion helps maintain tear fluid levels

**Provides incentive for patients and physicians**
- Non-invasive physician administration
- Preservative-free
- Product can be monitored by physician
- Buy and bill product with possibility of reimbursement for insertion
- Eliminates co-pay for Medicare Part B patients with supplemental insurance
MEAN IOP CHANGE FROM BASELINE

STATISTICALLY SIGNIFICANT GREATER MEAN IOP DECREASE FROM BASELINE WITH OTX-TP IN 8 OUT OF 9 ENDPOINTS

*Statistically Significant; \( P \leq 0.05; \)

Full Analysis Set (FAS) Population (N=554)
Least Squares Means

Confidential: Not For Distribution
OTX-TP PHASE 3 TRIAL CONCLUSIONS

OTX-TP DEMONSTRATED EFFICACY FOR CONTROLLING IOP IN SUBJECTS WITH PRIMARY OPEN ANGLE GLAUCOMA AND OCULAR HYPERTENSION FOR UP TO 12 WEEKS

• EFFICACY
  ✓ OTX-TP treated subjects had greater IOP lowering than vehicle treated subjects at all time points
  ✓ OTX-TP showed a statistically significant decrease in mean diurnal IOP than Placebo at Weeks 2, 6 & 12, except at 8 AM on Week 12 timepoint; Achieving 8 out of 9 primary efficacy endpoints

• SAFETY
  ✓ Generally well tolerated
  ✓ Most common ocular adverse events (>5%) in patients receiving OTX-TP were dacryocanaliculitis and lacrimal structural disorders
  ✓ There were no ocular serious adverse events
  ✓ Most TEAE’s were mild or moderate

• DURABILITY
  ✓ OTX-TP demonstrated the ability to lower IOP over 12 weeks with a single insert
  ✓ OTX-TP showed greater IOP lowering over the first 6 weeks compared with later time points

FDA meeting scheduled for October 30th 2019 on path forward
OTX-TIC DELIVERS TRAVOPROST FOR AT LEAST 6 MONTHS VIA INTRACAMERAL INJECTION

OTX-TIC (travoprost implant) for intracameral injection

Sustained zero-order release for approximately 6 months

• Pre-clinical model shows marked reduction in IOP and a matching PK/PD response
• Administered with proprietary injector (27 gauge) and delivered directly to site of action

Provides another tool in glaucoma specialists’ armamentarium

• 4-6 month duration
• Secure placement in the inferior angle
• Minimal effect on endothelial cells
• Full resorption prior to second dose
• Preservative-free
• Product can be monitored by physician
OTX-TIC PHASE 1 INTERIM FINDINGS

SUMMARY FROM LOW-DOSE COHORT

- Clinically-meaningful decrease in IOP
  IOP values were decreased as early as two days

- Duration of therapy
  IOP-lowering out to 9 months

- Bioresorbable
  Implant biodegraded by 7 months

- Implant location and movement
  Implant did not move and was visualized in all patients

- Corneal health
  No changes from baseline observed; preservative-free
OTX-TIC EFFICACY RESULTS: MEAN IOP CHANGE FROM BASELINE, COHORT 1

MEASUREMENTS TAKEN AT 8AM

Data as of mid-April 2019
ANTICIPATED NEAR-TERM MILESTONES

POSITIONING OCULAR THERAPEUTIX AS THE DRUG DELIVERY COMPANY

**Dextenza®** 2019 LAUNCH
(using pass-through reimbursement status using J-code 1096 effective October 1)

Progress of pipeline programs
- OTX-TP – discussion of Ph3A results with FDA (October 30, 2019)
- OTX-TIC – plans to evaluate 2 new formulations in the near future
- OTX-TKI – third therapeutic-dose cohort has begun enrollment

Take new product candidates into the clinic in 2019

Actively seek new business development opportunities
THANK YOU!

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