Simultaneous and Sustained Delivery of Bimatoprost and HA from Contact Lenses: A Preliminary Study on Glaucoma, Dry Eye, and Lens-Related Discomfort

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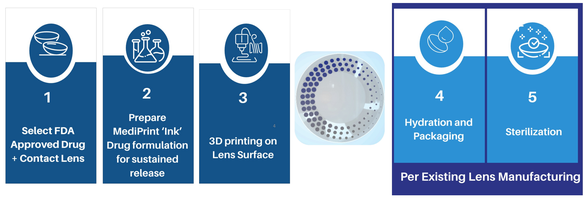
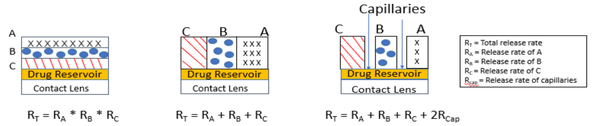
TECHNOLOGY



MediPrint Ophthalmics employs a 3D-printing technology to print FDA-approved drugs onto FDA-approved lenses.



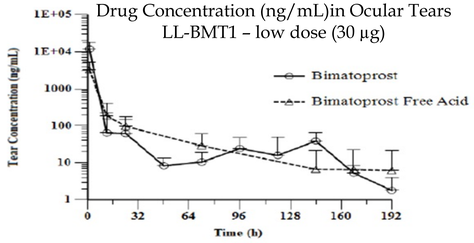
Barrier layers can be printed on a drug reservoir layer to modulate the drug release rate, as shown above.

Importantly, all MediPrint Ophthalmics' products are manufactured **preservative-free**, eliminating a major adverse effect of eyedrops.

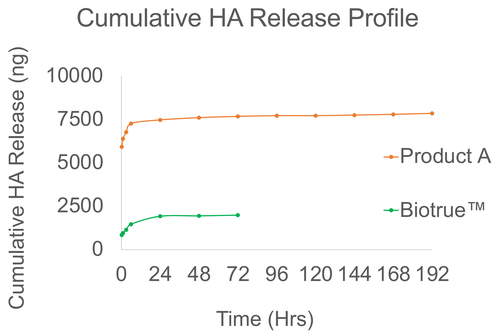
Additionally, a cornerstone of MediPrint's products is the release of **Hyaluronic Acid,** a natural lubricant that keeps the eye moist during lens wear

PRECLINICAL RESULTS

In-Vivo Drug Release Results: A pharmacokinetic study found Bimatoprost and bimatoprost free acid in rabbit tear samples up to 8 days, which confirmed the sustained release of bimatoprost for one week.



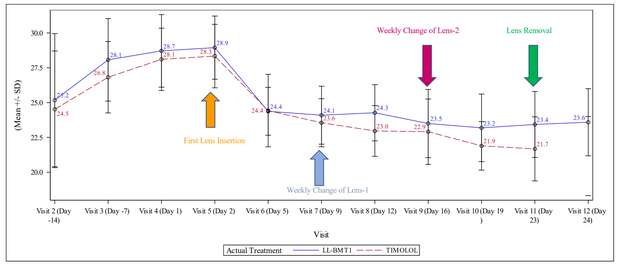
Hyaluronic Acid Release Results: HA was released in simulated tear fluid up to 8 days or 192 hours. MediPrint lenses released more than twice the amount of HA as the control, hydrogel lenses soaked in BioTrue™ Multi-Purpose solution.



CLINICAL RESULTS

	Test (MediPrint® 26 µg contact lens, x1/week)	Reference (Timolol 0.5% topical eye drops, x2/day)
Mean IOP[1] Change from Baseline (Week 3)	**–5.5**	**–6.7**
Clinically meaningful reduction in IOP	Yes	Yes
Number of instillations in 3 weeks (both eyes)	6	84
Preservative-free	Yes	No
	N=11	N=14

In the test arm, a sustained, clinically significant reduction in IOP was achieved for three weeks. IOP shown for test and reference for both eyes shown below:

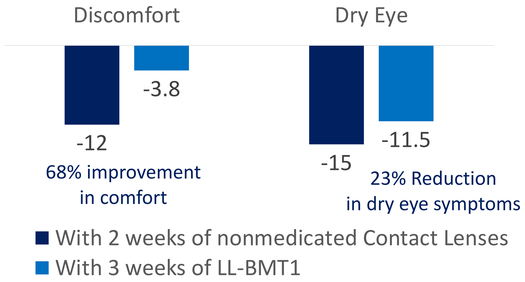


SAFETY AND TOLERABILITY

- Of 14 patients, 11 finished trial.
- No serious treatment emergent adverse events were observed
- No contact lens protein deposits were observed on either eye for any subject
- No external comfort agents were used during trial

EFFECT OF HYALURONIC ACID

During the three-week trial, **discomfort** and **dry eye** scores as per CLDEQ-8 improved by **68%** and **23%,** respectively.



CONCLUSIONS

- In the clinical study, a statistically significant IOP drop of 5.5 mmHg was sustained for three weeks
- Lenses were inserted just 6 times over three weeks, a 93% reduction in treatment frequency.
- LL-BMT1 was found to be safe and tolerable.
- There were no serious TEAEs observed.
- With sustained delivery of HA, comfort increased by 68%, and dry eye improved by 23%.
- Additional studies are in progress, with higher doses on LL-BMT1, to further optimize efficacy of product.

Results from interim analysis are FDA-approvable and validates our platform technology.