To: U.S. Food and Drug Administration Docket No. FDA-2014-N-0233

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Subject: Blister-based dispensing of Controlled Substances via Divert-X is safer than traditional bottle-based dispensing.

The Notice seeks commentary on **preventing accidental use** by someone for whom the medication was not prescribed. This is a critically-important objective because opioids are currently the number one cause of child poisonings in the US, even with the implementation of universal child safe dispensing.

Divert-X – the dispensing and behavioral monitoring system under development by Vatex – tackles the prescription drug abuse crisis directly by seeking to separate authentic patients from those who are exaggerating the intensity and duration of symptoms. Those who subvert the system to feed an addiction or sell their medications are far less likely to demonstrate the spectrum of dosing behaviors exhibited by compliant, authentic patients. A healthcare insurer has permitted Vatex to pilot Divert-X in a region it serves so that Vatex can demonstrate the efficacy of the intervention via robust science.

Divert-X packaging is assembled in pharmacies in order to have a broad impact. A dispensing system must be agnostic to dose, dosage form, and manufacturer to cater for all the forms of Controlled Substances that are diverted and misused. The broad applicability of Divert-X will greatly assist its adoption if shown to be effective. Unit dose packaging that meets F1 level requirements will be suitable for packaging any medication regardless of toxicity. Based on current Poison Prevention Packaging Act (PPPA) criteria (1-2), a blister system certified to an F1 level is far safer than a certified pharmacy dispensing bottle (assuming both fail). Specifically, if F1-certified packaging fails, then a single dose is available to a child; conversely, if a pharmacy dispensing bottle fails, then the entire contents are available to the child. Hence, blister systems have a role in opioid safety because opioids are currently the number one cause of child poisonings in the US, even with the implementation of universal child safe dispensing mandates (3). While factory-assembled blister packs have been certified to an F1 level, no child-safe features have been added to any blister system assembled in a pharmacy because no market need has existed to date. The main existing market for pharmacy-assembled blisters is long-term care facilities, and these facilities are exempt from PPPA requirements because their medication management practices are similar to hospitals. All Vatex products will achieve F1 certification prior to commercialization.

The Notice also seeks commentary on packaging approaches to minimize in-home theft of medication by teens, visitors, caregivers, etc. Because blister packaging allows inventory assessment via a quick visual inspection and because blister packaging averts substitution schemes that use lookalike pills, this will have a preventive impact. Additionally, patients using Divert-X can obtain recent dose-removal times via telephone, text message, etc. in order to conduct their own diligence. Most importantly, Divert-X provides strong incentives for returning unused medications soon after they are dispensed. These incentives are the subject of a separate submission to this docket (search for “Safe Disposal”).

Because Divert-X will be challenged by users who are looking to subvert it, the packaging must possess many features to dissuade tampering but highlight it when it occurs. A tamper assessment by the pharmacist is the final step in the Divert-X cycle prior to obtaining a final score. Vatex is advantaged by the fact that the adhesives already in use for in-pharmacy assembly are far stronger than the materials used to make the packaging. Vatex has assessed products from all North American manufacturers of pharmacy-fill cards; in all cases, the cardstock and foils fail when attempts are made to disassemble or subvert a blister card. The strength of the seal itself serves as a child-safety feature. The strength of the seal relative to the materials of construction is a key in making tampering evident. Tamper-resistance features and child-proof features augment each other, and they are tested together under PPPA certification.

The PPPA provides and mandates all details needed for child-resistant package testing, but the packaging must also be useable by senior adults in order to obtain any certification. Hence, the PPPA also provides mandated protocols for determination of the Senior Adult Use Effectiveness score (1-2). The design of PPPA trials, for children and senior adults, are mandated to a very high level of detail, to include items such as the text of all allowable verbal interactions between testers and participants, the text of consent forms to be used, and scoring requirements. All Vatex products will achieve F1 certification prior to commercialization.

References

1. U.S. Government Printing Office. Poison Prevention Packaging. Code of Federal Regulations, Title 16, Part 1700.20. 2013.

2. U.S. Consumer Product Safety Commission. Guide to Child Resistant and Senior-Friendly Packages. March 3, 2011. [cited May 2014]; Available from: http://www.cpsc.gov/Regulations-Laws--Standards/Statutes/Poison-Prevention-Packaging-Act/Child-Resistant-and-Senior-Friendly-Packages-packaging-guide/.

3. Burghardt LC, Ayers JW, Brownstein JS, Bronstein AC, Ewald MB, Bourgeois FT. Adult prescription drug use and pediatric medication exposures and poisonings. Pediatrics. 2013;132(1):18-27. [cited May 2014]; Available from: http://pediatrics.aappublications.org/content/132/1/18.long.