

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:

21-994

PROPRIETARY NAME REVIEW(S)

CONSULTATION RESPONSE
DIVISION OF MEDICATION ERRORS AND TECHNICAL SUPPORT
OFFICE OF DRUG SAFETY
(White Oak Mail Stop 4447)

DATE RECEIVED: December 15, 2005	DESIRED COMPLETION DATE: March 15, 2006	ODS CONSULT #: 05-0269 and 05-0269-1, 05-0269-2
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TO: Janice Soreth, M.D. Director, Division of Anti-Infective and Ophthalmologic Products		
THROUGH: Linda Kim-Jung, Pharm.D., Team Leader Denise Toyer, Pharm.D., Deputy Director Carol Holquist, R.Ph., Director Division of Medication Errors and Technical Support		
FROM: Laura L. Pincock, Pharm.D., Safety Evaluator Division of Medication Errors and Technical Support		
PRODUCT NAME: Travatan Z (primary) Travatan (secondary) Travatan (tertiary) (Travoprost Ophthalmic Solution) 0.004%		
NDA #: 21-994		
NDA SPONSOR: Alcon Research, Limited		
RECOMMENDATIONS: <ol style="list-style-type: none">1. DMETS does not recommend the use of the proprietary names "Travatan Z", "Travatan ", or "Travatan ".2. DMETS recommends implementation of the label and labeling revisions outlined in section III of this review to minimize potential errors with the use of this product.3. DDMAC finds the proprietary names "Travatan Z," "Travatan ," and "Travatar ," are acceptable from a promotional perspective.		
DMETS would appreciate feedback of the final outcome of this consult. We would be willing to meet with the Division for further discussion, if needed. If you have further questions or need clarifications, please contact Diane Smith, project manager, at 301-796-0538.		

Division of Medication Errors and Technical Support (DMETS)
Office of Drug Safety
HFD-420; White Oak Mail Stop 4447
Center for Drug Evaluation and Research

PROPRIETARY NAME REVIEW

DATE OF REVIEW: January 13, 2006

NDA# 21-994

NAME OF DRUG: Travatan Z (primary)
Travatan — (secondary)
Travatan — (tertiary)
(Travoprost Ophthalmic Solution)
0.004%

NDA HOLDER: Alcon Research, Limited

NOTE: This review contains proprietary and confidential information that should not be released to the public.

I. INTRODUCTION:

This consult was written in response to a request from the Division of Anti-Infective and Ophthalmology Products for assessment of the proprietary names, "Travatan Z" (primary), "Travatan — (secondary), and "Travatan — (tertiary), regarding potential name confusion with other proprietary and/or established drug names.

Travatan Ophthalmic Solution was approved March 16, 2001. This application is a product line extension of Travatan. In this application, Alcon is proposing a Benzalkonium Chloride-free (BAC-free) formulation of travoprost ophthalmic solution for which they propose the tradename "Travatan Z." The indication and dosing regimen for the new formulation will be identical to the currently formulation. The Sponsor plans to continue marketing Travatan Ophthalmic Solution in addition to the new BAC-free formulation.

DMETS discussed the use of modifiers with the Review Division at a meeting on February 3, 2006. DMETS conveyed that we generally discourage the use of modifiers which may be meaningless to healthcare practitioners and patients as the modifier can be misinterpreted and lead to medication errors. At the time, DMETS was particularly concerned with the modifiers "Z" and " —". "Z" is often misinterpreted as the number "2," and " —" is already in use with commonly known connotations (i.e., anti-fungal, antifibrillation, etc.), which differ from the intended meaning for the " —" modifier for Travatan. The Review Division acknowledged they understood DMETS' concerns with the use of modifiers. However, the Review Division indicated that the new formulation was a different product, would not be considered interchangeable with the current formulation, and that the modifier was intended to accompany the Travatan name to differentiate the two products

PRODUCT INFORMATION

“Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ is a Benzalkonium Chloride-free (BAC-free) formulation of Travoprost Ophthalmic Solution, which is currently marketed under the proprietary name Travatan Ophthalmic Solution. Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ is a modified formulation of Travatan and contains an alternate preservative. According to the sponsor, the suffix “Z” is intended to denote “zero BAC,” the suffix ~~_____~~ is intended to denote “alternate preservative,” and the suffix ~~_____~~ is intended to denote ~~_____~~. Travatan and Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ have the same indication, concentration (0.004%), size (2.5 mL or 5 mL), and dosage regimen (one drop in the affected eye(s) once daily in the evening).

Travoprost is a synthetic prostaglandin F_{2α} analogue. Travoprost free acid is a selective prostanoid receptor agonist which is believed to reduce intraocular pressure by increasing trabecular meshwork and uveoscleral outflow. The exact mechanism of action is unknown at this time. Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ is proposed to be indicated for the reduction of elevated intraocular pressure in patients with open-angle glaucoma or ocular hypertension who are intolerant of other intraocular pressure lowering medications or insufficiently responsive (failed to achieve targeted intraocular pressure determined after multiple measurements over time) to another intraocular pressure lowering medication. The recommended dosage is one drop in the affected eye(s) once daily in the evening. The dosage of Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ should not exceed once daily since it has been shown that more frequent administration of travoprost may decrease the intraocular pressure lowering effect. Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ will be supplied in two sizes of Alcon’s oval DROP-TAINER® package system (2.5 mL fill in 4 mL bottle and 5 mL fill in 7.5 mL bottle).

II. RISK ASSESSMENT:

The medication error staff of DMETS conducted a search of several standard published drug product reference texts^{1,2} as well as several FDA databases^{3,4} for existing drug names which sound-alike or look-alike to Travatan Z/Travatan ~~_____~~/Travatan ~~_____~~ to a degree where potential confusion between drug names could occur under the usual clinical practice settings. A search of the electronic online version of the U.S. Patent and Trademark Office’s Text and Image Database was also conducted⁵. An expert panel discussion was conducted to review all findings from the searches. In addition, DMETS conducted three prescription analysis studies for each proposed name consisting of two written prescription studies (inpatient and outpatient) and one verbal prescription study, involving health care practitioners within FDA. This exercise was conducted to simulate the prescription ordering process in order to evaluate potential errors in handwriting and verbal communication of the name.

¹ MICROMEDEX Integrated Index, 2006, MICROMEDEX, Inc., 6200 South Syracuse Way, Suite 300, Englewood, Colorado 80111-4740, which includes all products/databases within ChemKnowledge, DrugKnowledge, and RegsKnowledge Systems.

² Facts and Comparisons, online version, Facts and Comparisons, St. Louis, MO.

³ AMF Decision Support System [DSS], the Division of Medication Errors and Technical Support [DMETS] database of Proprietary name consultation requests, New Drug Approvals 98-06, and the electronic online version of the FDA Orange Book.

⁴ Phonetic and Orthographic Computer Analysis (POCA)

⁵ WWW location <http://www.uspto.gov/tmdb/index.html>.

A. EXPERT PANEL DISCUSSION (EPD)

An Expert Panel discussion was held by DMETS to gather professional opinions on the safety of the proprietary names Travatan Z, Travatan ~~_____~~, and Travatan ~~_____~~. Potential concerns regarding drug marketing and promotion related to the proposed names were also discussed. This group is composed of DMETS Medication Errors Prevention Staff and representation from the Division of Drug Marketing, Advertising, and Communications (DDMAC). The group relies on their clinical and other professional experiences and a number of standard references when making a decision on the acceptability of a proprietary name.

1. DDMAC has no objections to the tradenames "Travatan Z," "Travatan ~~_____~~" and "Travatan ~~_____~~" from a promotional perspective.
2. EPD panelists stated that the proposed modifier "Z" could be misinterpreted as the number "2".
3. EPD panelists stated that the proposed modifier "~~_____~~" could be misinterpreted as a medical abbreviation for ~~_____~~. Another panelist stated that "~~_____~~" could be misinterpreted as the medical abbreviations "AD" (right ear) or "OD" (right eye).
4. EPD panelists stated that the proposed modifier "~~_____~~" could be misinterpreted because the modifier "~~_____~~" is used in currently marketed prescription and non-prescription drug products and is associated with different meanings than "~~_____~~". "~~_____~~" also means ~~_____~~.
5. The Expert Panel identified five proprietary names that were thought to have the potential for look-alike confusion with Travatan Z, Travatan ~~_____~~, and Travatan ~~_____~~. These products are listed in Table 1 (page 5), along with the dosage forms available and usual dosage.

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Table 1: TRAVATAN/TRAVATAN AP/TRAVATAN AF: Potential Sound-Alike/Look-Alike Names Identified by DMETS Expert Panel

Product Name	Dosage form(s), Established name	Usual adult dose*	Other**
Travatan Z Travatan Travatan	Travaprost Ophthalmic Solution: 0.004% 2.5 mL and 5 mL bottles	1 drop once daily in the evening instilled into affected eye(s)	N/A
Travatan	Travaprost Ophthalmic Solution: 0.004% 2.5 mL and 5 mL bottles	1 drop once daily in the evening instilled into affected eye(s)	LA
Trexatyn***	Pralatrexate Injection: 20 mg/mL	Dose of 135 mg/m ² to 170 mg/m ² administered IV push over 3 minutes to 5 minutes (with possible dose reduction to 67.5 mg/m ² per defined toxicity criteria) once every 2 weeks	LA
Truvada	Emtricitabine/Tenofovir Tablets: 200 mg/300 mg	1 tablet (emtricitabine 200 mg; tenofovir 300 mg) orally once daily, with or without food.	LA
Teveten	Eprosartan Tablets: 400 mg, 600 mg	Initially, 600 mg orally once daily, when used as monotherapy in euvolemic patients. Adjust dosage based on clinical response. The usual dosage range is 400 mg to 800 mg/day PO, given in 1 or 2 divided doses. The maximum dosage is 900 mg/day.	LA
Travasol	Amino Acids Solution: varying concentrations	Administered for nutritional support as part of a parenteral nutrition order. Given intravenously and ordered in milliliters per hour as specified.	LA

*Frequently used, not all-inclusive.
 **LA (look-alike), SA (sound-alike)
 ***Name pending approval. Not FOI releasable.

B. PRESCRIPTION ANALYSIS STUDIES

1. Methodology:

Nine separate studies (three for each name) were conducted within the Centers of the FDA for the proposed proprietary names to determine the degree of confusion of Travatan Z, Travatan ~~—~~, and Travatar ~~—~~ with marketed U.S. drug names (proprietary and established) due to similarity in visual appearance with handwritten prescriptions or verbal pronunciation of the drug name. The set of studies (i.e., inpatient, outpatient, and verbal study for each name) employed a total of 124 health care professionals (pharmacists, physicians, and nurses). This exercise was conducted in an attempt to simulate the prescription ordering process. An inpatient order and an outpatient prescription were written for each name, each consisting of a combination of marketed and unapproved drug products and a prescription for Travatan Z, Travatan ~~—~~, or Travatar ~~—~~ (see pages 6-7). These prescriptions were optically scanned and one prescription was delivered to a random sample of the participating health professionals via e-mail. In addition, the outpatient orders were recorded on voice mail. The voice mail messages were then sent to a random sample of the participating health professionals for their interpretations and review. After receiving either the written or verbal prescription orders, the participants sent their interpretations of the orders via e-mail to the medication error staff.

a. Travatan Z

HANDWRITTEN PRESCRIPTION	VERBAL PRESCRIPTION
<p>Outpatient RX:</p> <p><i>Travatan Z</i></p> <p><i>#1</i></p> <p><i>Instill 1 drop into affected eye every evening</i></p>	<p>“Travatan Z, dispense 1, instill 1 drop into the affected eye every evening”</p>
<p>Inpatient RX:</p> <p><i>Travatan Z instill 1 drop into affected eye every evening</i></p>	

b. Results for Travatan Z:

Ten respondents in the inpatient written study interpreted Travatan Z as the currently marketed product Travatan. One respondent in the inpatient handwritten study interpreted the letter Z as the number 8. The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatan Z. See Appendix A for the complete listing of interpretations from the verbal and written studies.

c. Travatan —

HANDWRITTEN PRESCRIPTION	VERBAL PRESCRIPTION
<p>Outpatient RX:</p> <p><i>Travatan — #1</i></p> <p><i>I get on QAM</i></p>	<p>“Travatan —, instill one drop into each eye every evening ”</p>
<p>Inpatient RX:</p> <p><i>Travatan AP instill I get into eye</i></p>	

d. Results for Travatan —

Two respondents in the outpatient written study interpreted Travatan — as the currently marketed product Travatan. The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatan — See Appendix B for the complete listing of interpretations from the verbal and written studies.

e. Travatar —

HANDWRITTEN PRESCRIPTION	VERBAL PRESCRIPTION
<p>Outpatient RX:</p> <p>Travatan [] #1 instill one drop into both eyes at bedtime</p>	<p>“Travatan —, number 1, instill 1 drop into both eyes QHS”</p>
<p>Inpatient RX:</p> <p>Travatan HF - 1 on 0HS</p>	

f. Results for Travatar —

None of the interpretations of the proposed name overlap, sounds similar, or looks similar to any currently marketed U.S. product. One respondent stated that the modifier — implies antifungal. If the drug is not —, the — is misleading.” Another respondent stated that “The meaning of the suffix letters — is quite unclear and could cause errors.” The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatar. — See Appendix C for the complete listing of interpretations from the verbal and written studies.

C. ADVERSE EVENT REPORTING SYSTEM (AERS)

DMETS conducted a search of the Adverse Event Reporting System (AERS) for medication errors associated with Travatan. The preferred terms “Pharmaceutical Product Complaint,” “Treatment Noncompliance,” “Medication Error,” “Accidental Exposure,” “Underdose,” “Intercepted Medication Error,” “Circumstance or Information Capable of Leading to Medication Error,” “Drug Prescribing Error,” and “Drug Dispensing Error” were used. AERS searches were run for Travatan and also between Travatan and the currently marketed products Teveten, Travasol, and Truvada. No cases of medication errors associated with Travatan were identified.

D. SAFETY EVALUATOR RISK ASSESSMENT

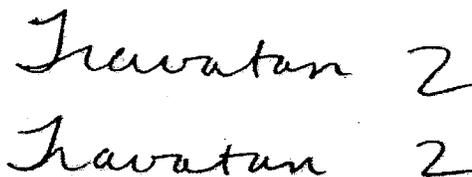
1. Travatan Z Name Review

In reviewing the proprietary name Travatan Z, the primary concerns identified from the Expert Panel related to look-alike and sound-alike confusion with Travatan, Teveten, Travasol, Truvada, and Trexatyn. Upon further review of the names gathered from EPD, independent analysis, and POCA, the name Truvada was not reviewed further due to a lack of convincing look-alike/sound-alike similarities with Travatan Z, in addition to numerous differentiating product characteristics such as the product strength, indication for use, and dosage formulation. In the AERS search, DMETS found no existing confusion between Travatan and Teveten or Travasol. Therefore, Teveten and Travasol will not be discussed further.

Additionally, DMETS conducted prescription studies to simulate the prescription ordering process. Ten respondents in the inpatient handwritten study interpreted Travatan Z as the currently marketed product Travatan. One respondent in the inpatient handwritten study interpreted the letter Z as the number 8. Although there are limitations to the predictive value of these studies, primarily due to small sample size, we have acquired safety concerns due to the positive interpretation with this drug product. A positive finding with a small sample size may indicate a high risk and potential for medication errors when extrapolated to the general U.S. population.

- a. Travatan Z looks similar to Travatan. According to the sponsor, the modifier 'Z' is intended to denote "zero BAC". In general, DMETS discourages the use of modifiers which may be meaningless to healthcare practitioners and patients as the modifier can be misinterpreted and lead to medication errors. In this instance, it is not likely that the modifier 'Z' will be interpreted as "zero BAC." Rather, it is likely that the 'Z' would be misinterpreted as "zero preservative", which is not an accurate representation for the new formulation.

Travatan and Travatan Z look similar because they share the same root name, Travatan. DMETS is concerned, because with the exception of the modifier "Z", prescriptions for Travatan and Travatan Z will be written for the same indication, concentration (0.004%), package size (2.5 mL or 5 mL), and dosage regimen (one drop in the affected eye(s) once daily in the evening). Thus, if the "Z" modifier is overlooked or misinterpreted, a medication error could occur and the patient would receive the Travatan product instead. This is potentially troublesome if the patient is allergic or sensitive to Benzalkonium Chloride, and the doctor intended the patient to receive the BAC-free formulation. Additionally, DMETS notes that the suffix letter "Z" is often confused with the number "2" and can result in a medication error.

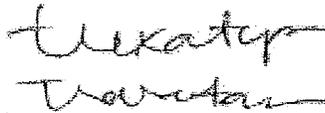


The image shows two lines of handwritten text. The first line reads "Travatan Z" and the second line reads "Travatan 2". The handwriting is cursive and the letter 'Z' in the first line and the number '2' in the second line are written in a way that makes them look very similar, illustrating the potential for confusion.

Additionally, one respondent in the DMETS' inpatient handwritten study misinterpreted the letter Z as the number "8". If the "Z" in Travatan Z is misinterpreted as the number "2" or the number "8", the patient could receive two or eight bottles of the Travatan product which contains BAC, also problematic if the patient is allergic or sensitive to BAC. At our meeting with the Review Division on February 3, 2006, the Division stated that this error is unlikely to be clinically significant. However, if the Z is misinterpreted as the number "2" or number "8", the pharmacist or patient could also interpret the numeral as the number of eye drops to be administered, leading the patient to instill double or eight-times the usual dose of the wrong Travatan product. This is potentially troublesome. Therefore, DMETS does not recommend use of the modifier "Z" in the proprietary name Travatan Z because the modifier is meaningless and may be misleading which may lead to medication errors.

- b. Travatan Z may look similar to Trexatyn***. Trexatyn*** is an injectable cytotoxic agent related to methotrexate and other related dihydrofolate reductase inhibitors. This product is under review at FDA under the proprietary names Neofol (primary)*** and Trexatyn (secondary)*** (IND 52, 604). DMETS did not recommend the use of the name Neofol*** but had no objections to Trexatyn*** in ODS Consults # 05-0072 and # 05-0072-1. Trexatyn*** is administered via intravenous push over three to five minutes at doses of 135-170 mg/m² per defined toxicity criteria, given once every two weeks. The orthographic similarity stems from the fact that both names begin with the letters "Tr-" and end with the letter 'n'. Additionally, the letter 'x' in Trexatyn*** may resemble the letter 'v' in Travatan depending on how it is scripted which also contributes to the look-alike similarities of the names. Furthermore, each name has an upstroke from the letter 't' located in a similar position within the name. However, the name Trexatyn*** contains a downstroke from the letter 'y' which may help to differentiate the names when scripted. Furthermore, the letter 'Z' modifier in the name Travatan Z may help to differentiate between the two names.

TREXATYN
TRAVATAN Z



Additionally, there are different product characteristics that may help to distinguish the two products such as: dosage form (injectable vs. ophthalmic solution), dose (1 drop vs. 135-170 mg/m² or the milligram dose based on the patient's body surface area), and marketed strength (20 mg/mL vs. 0.004%). Because Trexatyn*** is an injectable product requiring refrigeration and Travatan Z is an ophthalmic product stored at room temperature, it is not likely that these two products will be stored together in close proximity, and thus, there is low potential for product selection error. Furthermore, the different dosing frequency (once daily vs. once every two weeks) will help to further differentiate between the two names. Moreover, since Travatan Z is an ophthalmic product, the affected eye(s) (OD, OU, OS, etc.) are likely to be indicated on a prescription which will further aid in differentiating this name pair. Since both products are available with only one strength, the product strength may be omitted on a prescription for either product. However, a prescription for Trexatyn*** will contain the prescribed dose (135-170 mg/m² or the milligram dose based on the patient's body surface area) which will differentiate between the two names. Furthermore, since Trexatyn*** is a chemotherapeutic agent, it will be ordered on chemotherapeutic order forms and administered in a clinical setting where dosage preparation and administration is performed by healthcare professionals who are familiar with its use. Thus, the orthographic differences along with the different product characteristics, especially route of administration, dose, and dosing frequency will help minimize the potential for confusion between these two drug products.

2. Travatan — Name Review

In reviewing the proprietary name Travatan —, the primary concerns identified from the Expert Panel related to look-alike confusion with Travatan and use of the modifier ‘—’.

Additionally, DMETS conducted prescription studies to simulate the prescription ordering process. Two respondents in the outpatient handwritten study misinterpreted Travatan — as the currently marketed product Travatan. The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatan —

According to the sponsor, the suffix “—” is intended to denote “alternate preservative”. As we stated previously in the discussion for Travatan Z (see page 8), DMETS is concerned with the use of modifiers that may be meaningless to healthcare practitioners and patients. Additionally, there are safety concerns with the modifier “—.” EPD panelists stated that ‘—’ could be misinterpreted because it is a commonly used medical abbreviation for _____ (his list of abbreviations is not all inclusive). Another panelist stated that “—” could be misinterpreted as “AD” (right ear) or “OD” (right eye) if not scripted clearly. The Institute for Safe Medication Practices (ISMP) maintains a “List of Error-Prone Abbreviations, Symbols, and Dose Designations” and the abbreviations “AD” and “OD” are on the list as often misinterpreted. If the modifier ‘—’ is interpreted as “OD”, misinterpretation may result with both the pharmacist and patient as to whether Travatan — should be administered into only the right eye rather than both eyes or just the left eye. It is potentially troublesome if the modifier ‘—’ is misinterpreted as “AD”, as the patient could be directed to instill the ophthalmic solution into their right ear. A pharmacist may be able to intercept the misinterpretation, knowing that Travatan is an ophthalmic product used to decrease intraocular pressure and should not be administered into the ear; however, nurses and patients may not be able to identify an error. Additionally, DMETS notes that there are several ophthalmic products that may be ordered with an “off-label” indication with directions to instill drops into the ear. This is a well recognized off-label use for some ophthalmic products and thus, it is not unlikely that healthcare practitioners (e.g., pharmacists, nurses) may not question the order. DMETS is unable to ascertain the clinical significance of a patient instilling Travatan into their ear. DMETS does not recommend use of the modifier “—” in the proprietary name Travatan AP.

Travatan [] }
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3. Travatan — Name Review

In reviewing the proprietary name Travatan —, the primary concerns identified from the Expert Panel related to look-alike confusion with Travatan and use of the modifier ‘—’.

Additionally, DMETS conducted prescription studies to simulate the prescription ordering process. None of the interpretations of the proposed name, Travatan —, overlap, sound

similar, or looks similar to any currently marketed U.S. product. However, one respondent stated that the modifier “—” implies antifungal. If the drug is not antifungal, the “—” is misleading.” Another respondent stated that “The meaning of the suffix letters / “—” is quite unclear and could cause errors.” The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatan —

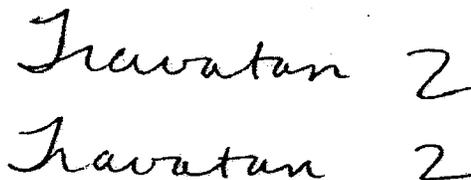
Travatan looks similar to Travatan — According to the sponsor, the suffix “—” is intended to denote “alternate formulation”. There are safety concerns with the modifier “—”. The EPD panelists stated that “—” could be misinterpreted because the modifier “—” is used in currently marketed prescription drug products including Diprolene — (—), Betapace — (—), and SSD — (—). The modifier “—” is also commonly used in non-prescription products such as Lotrimin — (—). Thus, the modifier “—” has many connotations in the marketplace and may result in confusion with healthcare professionals. DMETS does not recommend use of the modifier “—” in the proprietary name Travatan —

III. COMMENTS TO THE SPONSOR:

DMETS does not recommend the use of the proprietary name “Travatan Z”, “Travatan —”, or “Travatan —”. In reviewing the proprietary names, the primary concerns related to use of the modifiers and the potential for look-alike confusion with the currently marketed Travatan Ophthalmic Solution.

- A. Travatan Z looks similar to Travatan. According to the sponsor, the modifier ‘Z’ is intended to denote “zero BAC”. In general, DMETS discourages the use of modifiers which may be meaningless to healthcare practitioners and patients. It is not likely that the modifier ‘Z’ will be interpreted as “zero BAC.” Rather, it is likely that the ‘Z’ would be misinterpreted as “zero preservative”, which is not an accurate representation for the new formulation.

Travatan and Travatan Z look similar because they share the same root name, Travatan. DMETS is concerned, because with the exception of the modifier “Z”, prescriptions for Travatan and Travatan Z will be written for the same indication, concentration (0.004%) , package size (2.5 mL or 5 mL), and dosage regimen (one drop in the affected eye(s) once daily in the evening). Thus, if the Z modifier is overlooked or misinterpreted, a medication error could occur and the patient would receive the Travatan product instead. This is potentially troublesome if the patient is allergic or sensitive to Benzalkonium Chloride, and the doctor intended the patient to receive the BAC-free formulation. Additionally, DMETS notes that the suffix letter “Z” is often confused with the number “2” and can result in a medication error.



Travatan Z
Travatan Z

Additionally, one respondent in the DMETS’ inpatient handwritten study interpreted the letter Z as the number “8”. If the “Z” in Travatan Z is interpreted as the number “2” or the number “8”, the patient could receive two or eight bottles of the Travatan product which contains BAC, also problematic if the patient is allergic or sensitive to BAC. DMETS is unable to ascertain the clinical significance of the patient receiving the wrong formulation. At our meeting with the

Review Division on February 2, 2006, the Division was stated that this error is unlikely to be clinically significant. Regardless, DMETS does not recommend use of the modifier "Z" in the proprietary name Travatan Z because the modifier is meaningless and may contribute to medication errors.

- B. In reviewing the proprietary name Travatan — the primary concerns identified from the Expert Panel related to look-alike confusion with Travatan and use of the modifier ' —

Additionally, DMETS conducted prescription studies to simulate the prescription ordering process. Two respondents in the outpatient handwritten study interpreted Travatan — as the currently marketed product Travatan. The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatan —

According to the sponsor, the suffix ' — is intended to denote "alternate preservative". As we stated previously in the discussion for Travatan Z (see section A), DMETS is concerned with the use of modifiers that may be meaningless to healthcare practitioners and patients. Additionally, there are safety concerns with the modifier ' — EPD panelists stated that ' — could be misinterpreted because it is a commonly used medical abbreviation for — , and : — (this list of abbreviations is not all inclusive). Another panelist stated that ' — could be misinterpreted as "AD" (right ear) or "OD" (right eye) if not scripted clearly. The Institute for Safe Medication Practices (ISMP) maintains a "List of Error-Prone Abbreviations, Symbols, and Dose Designations" and the abbreviations "AD" and "OD" are on the list as often misinterpreted. If the modifier ' — is interpreted as "OD", misinterpretation may result with both the pharmacist and patient as to whether Travatan — should be administered into only the right eye, rather than both eyes or only the left eye. It is potentially troublesome if the modifier ' — is misinterpreted as "AD", as the patient could be directed to instill the ophthalmic solution into their right ear. A pharmacist may be able to intercept the misinterpretation, knowing that Travatan is an ophthalmic product used to decrease intraocular pressure and should not be administered into the ear; however, nurses and patients may not be able to identify an error. DMETS notes that there are several ophthalmic products that may be ordered with an "off-label" indication with directions to instill drops into the ear. Many nurses are aware of this and may not be as likely to question an order for Travatan ophthalmic solution to be administered in the ear. DMETS is unable to ascertain the clinical significance of a patient instilling Travatan into their ear. DMETS does not recommend use of the modifier ' — in the proprietary name Travatan —

Travatan []
#1
UD

- C. In reviewing the proprietary name Travatan — the primary concerns identified from the Expert Panel related to look-alike confusion with Travatan and use of the modifier ' —

Additionally, DMETS conducted prescription studies to simulate the prescription ordering process. None of the interpretations of the proposed name, Travatan — overlap, sound similar, or looks similar to any currently marketed U.S. product. However, one respondent stated that the modifier " — implies — If the drug is no — the — is misleading." Another respondent stated that "The meaning of the suffix letters — is quite unclear and could cause

errors." The majority of misinterpretations were misspelled/phonetic variations of the proposed name, Travatan

Travatan looks similar to Travatan According to the sponsor, the suffix ' is intended to denote "alternate formulation". There are safety concerns with the modifier " The EPD panelists stated that " could be misinterpreted because the modifier " is used in currently marketed prescription drug products including, Diprolene (" "), Betapace (" ?"), and SSD ("Anti-fungal?"). The modifier ' is also commonly used in non-prescription products such as Lotrimin (" "). Thus, the modifier " has many connotations in the marketplace and may result in confusion with healthcare professionals. DMETS does not recommend use of the modifier " in the proprietary name Travatan

- D. In review of the container labels, carton and insert labeling of Travatan Z/Travatan /Travatan DMETS has attempted to focus on safety issues relating to possible medication errors. DMETS has identified several areas of possible improvement, which might minimize potential error.

1. GENERAL COMMENTS

- a. DMETS notes that the draft container labels and carton labeling were submitted in black and white text, without the use of colors, graphics, fonts or other methods of formatting. Thus, it is not possible to fully assess if there are any safety concerns due to the labels and labeling because the information provided did not reflect the label and labeling presentation that will actually be used in the marketplace. Please forward copies of the revised labels and labeling, in color and reflective of the presentation that will actually be used in the marketplace, when they are available.
- b. DMETS recommends that the Travatan Z/Travatan /Travatan labels and labeling include increased prominence of the modifier through use of color, increased font size, bolding, etc., so that it is readily distinguishable from Travatan. Additionally, the packaging for the new formulation should be prominently distinguishable from the packaging for the current formulation to decrease the potential for selection errors.

2. CONTAINER LABEL

- a. See General Comment A and B.
- b. Revise the statement "FOR PROFESSIONAL USE" so that the label clearly denotes its status as a drug sample, e.g., "Sample," "Not for Sale," or "Professional Courtesy Package" [21 CFR 203.38(c)]. As currently written, "FOR PROFESSIONAL USE" does not indicate the bottle is a sample.

3. CARTON LABELING

- a. See General Comment A and B.

- b. Revise the statement "FOR PROFESSIONAL USE —" so that the carton clearly denotes its status as a drug sample, e.g., "Sample," "Not for Sale," or "Professional Courtesy Package" [21 CFR 203.38(c)]. As currently written, "FOR PROFESSIONAL USE —" does not indicate the carton contains a sample.

4. INSERT LABELING

DMETS has no recommendations on the insert labeling at this time.

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Outpatient

Travatab Z
Travation Z
Travatan Z
Travatin Z
Travatan Z
Travatan Z
Travatan Z
Travatan Z
Travation Z
Travatin Z
Travatan Z
Travation Z
Travator Z

Verbal

Travitan Z
Travatan Z
Travican-Z
Travatan Z
Travatan Z
Travatan Z
Travatam Z
Travatan Z

Inpatient

Travatan Z
Travatine
Travatanz
Travatanz
Travatin
Travatan Z
Travatan Z
Travatan
Travatan
Tavatin
Travitan ?
Navotion
Travatan
Travatan Z
Travatino
Travatan 8
Travatane
Travaton

2 Page(s) Withheld

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/s/

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4/20/2006 12:25:55 PM
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Also signing for Carol Holquist, Director, DMETS

Carol Holquist
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