CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: 21-983

ADMINISTRATIVE and CORRESPONDENCE DOCUMENTS

DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration Rockville, MD 20857

NDA 21-983

Meridian Medical Technologies Incorporated
Attn: Michelle Dietl
Senior Regulatory Affairs Specialist
1945 Craig Road
Saint Louis, MO 63146

Dear Ms. Dietl:

Please refer to your New Drug Application (NDA) submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for Atropine/Pralidoxime Chloride Injection.

Since 2000, FDA has conducted several comprehensive inspections of bioequivalence studies in which the bioanalytical analysis was conducted by The findings of these inspections raise significant concerns about the validity of the reported results of these analytical studies conducted in support of drug applications for marketing. Our findings from these inspections include, but are not limited to, the following:

- Failure to conduct a systematic and thorough evaluation to identify and correct sources of contamination.
- Failure to investigate anomalous results.
- Lack of assay reproducibility between original and repeat results.
- Assay accuracy not assured under the conditions of sample processing.
- Biased exclusion of study data resulting in the acceptance of failed runs.
- Failure to demonstrate the accuracy of analytical methods with appropriate validation experiments and documentation.

As a result of these findings, — agreed to conduct an audit of data from all its bioequivalence studies generated from January 2000 to December 2004. However, FDA identified significant deficiencies with the — audit during its most recent inspection. Thus, serious questions remain about the validity of any data generated by — in studies during this time period that have not

NDA 21-983 Page 2

been inspected by FDA. In view of these findings, FDA is informing holders of approved NDAs of these issues.

The impact of the data from these studies (which may include bioequivalence, pharmacokinetic, drug-drug interaction and others) cannot be assessed without knowing the details regarding the study and how the data in question were considered in the overall development and approval of your drug product. At this time, the Office of New Drugs is searching available documentation to determine which NDAs are impacted by the above findings.

To further expedite this process, we ask that you inform us within 30 days of receipt of this letter if you have submitted any studies conducted by — during the time period of concern (January 2000 through December 2004). Please submit information on each of the studies submitted, including supplement number (if appropriate), study name/protocol number, and date of submission. This information should be submitted as correspondence to your NDA. In addition, please provide a desk copy to:

Office of New Drugs Center for Drug Evaluation and Research 10903 New Hampshire Avenue Bldg. 22, Room 6300 Silver Spring, MD 20993-0002

Once we have made an assessment regarding the potential impact of these data, we will contact you regarding the steps that need to be taken, if any, to assure the accuracy of the data submitted to your application.

If you have any questions, call CDR Jacqueline Ware, Regulatory Project Manager, at 301-796-1160.

Sincerely,

{See appended electronic signature page}

Russell Katz, MD Director Division of Neurology Products Office of Drug Evaluation I Center for Drug Evaluation and Research

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/s/

Robbin Nighswander 1/25/2007 03:20:53 PM For Division Director

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DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE FOOD AND DRUG ADMINISTRATION		REQUEST FOR CONSULTATION					
TO (Division/Office): Director, Division of Med Errors and Technical Support (DMET WO 22 Rm. 4421						roducts (DNP)	
DATE July 7, 2006	IND NO.		NDA NO. 21-983	NDA	TYPE OF DOCUMENT NDA Amendment- proprietary name reconsideration request DATE OF DOCUMENT June 21, 2006		
MAME GEDRUG (Atropine/Pralide Auto-Injector	(Atropine/Pralidoxime) Priority		ONSIDERATION	CLASSIFICATION OF DRUG		DESIRED COMPLETION DATE August 18, 2006 PDUFA goal date: September 28, 2006	b(
NAME OF FIRM: Meridian Me	dical Techi	nologies					
			REA	ASON FO	R REQUEST		
				I. GEN	ERAL		
□ NEW PROTOCOL □ PRE-NDA MEETING □ PROGRESS REPORT □ END OF PHASE II ME □ NEW CORRESPONDENCE □ RESUBMISSION □ DRUG ADVERTISING □ SAFETY/EFFICACY □ ADVERSE REACTION REPORT □ PAPER NDA □ MANUFACTURING CHANGE/ADDITION □ CONTROL SUPPLEN □ MEETING PLANNED BY			MEETING	☐ FINAL PRINTE ☐ LABELING RE ☐ ORIGINAL NE ☐ FORMULATIVI ☑ OTHER (SPEC	VISION W CORRESPONDENCE		
				II. BIOM	ETRICS		
STATISTICAL EVALUATION BRAN	I CH				STATISTICAL APPLICATION BRANCH		
☐ TYPE A OR B NDA REVIEW ☐ END OF PHASE II MEETING ☐ CONTROLLED STUDIES ☐ PROTOCOL REVIEW ☐ OTHER (SPECIFY BELOW):				,	☐ CHEMISTRY REVIEW ☐ PHARMACOLOGY ☐ BIOPHARMACEUTICS ☐ OTHER (SPECIFY BELOW):		
		-	III. E	BIOPHAR	MACEUTICS		
☐ DISSOLUTION ☐ BIOAVAILABILTY STUDIES ☐ PHASE IV STUDIES				☐ DEFICIENCY LETTER RESPONSE ☐ PROTOCOL-BIOPHARMACEUTICS ☐ IN-VIVO WAIVER REQUEST			
			IV.	DRUG EX	PERIENCE		
☐ PHASE IV SURVEILLANCE/EPIDEMIOLOGY PROTOCOL ☐ DRUG USE e.g. POPULATION EXPOSURE, ASSOCIATED DIAGNOSES ☐ CASE REPORTS OF SPECIFIC REACTIONS (List below) ☐ COMPARATIVE RISK ASSESSMENT ON GENERIC DRUG GROUP					☐ REVIEW OF MARKETING EXPERIENCE, DRUG USE AND SAFETY ☐ SUMMARY OF ADVERSE EXPERIENCE ☐ POISON RISK ANALYSIS		
		·	V. SCIE	NTIFIC IN	VESTIGATIONS		
☐ CLINICAL					☐ PRECLINICAL		
in case DDMAC ag	rees with t	he firm's ne	w arguments pro	ovided		lian's previously submitted name, ion. Please also comment on the [Electronic copy attache.]	b(4
additional DMETS review wa firm has submitted a request \\cdsesub1\\\21983_000\	s performed for reconside 2006-05-15	d. The Divisi deration as w	on conveyed this ell as 2 alternativ	recomn e name	nendation to the firm via phone & s for review. An electronic copy	se of the proprietary name, No email on January 5, 2006. As such, the of the NDA package insert can be found at:	b(4
name accept	tability of the	e 2 new prop	osed names is no	eded a	s soon as possible. A consult ha	s also been sent concurrently to DDMAC.	
SIGNATURE OF REQUESTER Jackie Ware, Pharm.D., Regulatory Project Manager 301-796-1160; Jacqueline.ware@fda.hhs.gov				METHOD OF DELIVERY (Check one) MAIL	⊠ HAND		
SIGNATURE OF RECEIVED					SIGNATURE OF DELIVERER		1

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

FOOD AND DRUG ADMINISTRATION

APPLICATION TO MARKET A NEW DRUG, BIOLOGIC, OR AN ANTIBIOTIC DRUG FOR HUMAN USE

Form Approved: OMB No. 0910-0430 Expiration Date: April 30, 2009 See OMB Statement on page 2.

FOR FDA USE ONLY

(Title 21, Code of Federal Re	& 601)	APPLICATION NUMBER		
APPLICANT INFORMATION	·			
NAME OF APPLICANT		DATE OF SUBMISSION		
Meridian Medical Technologies, Inc.		06/21/2006		
TELEPHONE NO. (Include Area Code)		FACSIMILE (FAX) Number (include Area Code)		
(314) 682-3000		(314) 682-3001		
APPLICANT ADDRESS (Number, Street, City, State, Cour Code, and U.S. License number if previously issued): 1945 Craig Road St. Louis, MO 63146	atry, ZIP Code or Mail	AUTHORIZED U.S. AGENT NAME & ADDRESS (Number, Street, City, State, ZIP Code, telephone & FAX number) IF APPLICABLE N/A		
PRODUCT DESCRIPTION				
NEW DRUG OR ANTIBIOTIC APPLICATION NUMBER, O	R BIOLOGICS LICENSE A			
ESTABLISHED NAME (e.g., Proper name, USP/USAN nar Atropine Injection and Pralidoxime Chloric		PROPRIETARY NAME (trade name) IF ANY [TRADENAME] Atropine — Pralidoxime Chloride Injection		
CHEMICAL/BIOCHEMICAL/BLOOD PRODUCT NAME (If	any)		CODE NAME (If any)	
Atropine, Pralidoxime Chloride			N/A	
DOSAGE FORM:	STRENGTHS:		ROUTE OF ADMINISTRATION:	
Injectable	2.1 mg/0.7 mL of Atropine and 600 mg/ Intramuscular 2 mL of Pralidoxime Chloride		Intramuscular	
(PROPOSED) INDICATION(S) FOR USE:	·			
The treatment of poisoning by organopho	sphorous nerve ago	ents as well as organor	phosphorous insecticides.	
APPLICATION DESCRIPTION				
APPLICATION TYPE (check one) NEW DRUG APPLICATION (CDA, 21 CFR 314.50) ABBREVIATED NEW DRUG APPLICATION (ANDA, 21 CFR 314.94)				
BIOLOGICS LICENSE APPLICATION (BLA, 21 CFR Part 601)				
	IF AN NDA, IDENTIFY THE APPROPRIATE TYPE S505 (b)(1) 505 (b)(2) IF AN ANDA, OR 505(b)(2), IDENTIFY THE REFERENCE LISTED DRUG PRODUCT THAT IS THE BASIS FOR THE SUBMISSION			
			SUBINISSION	
Name of Drug	lame of Drug Holder of Approved Application			
TYPE OF SUBMISSION (check one)				
☐ PRESUBMISSION ☐ ANNUAL REPORT ☐ ESTABLISHMENT DESCRIPTION SUPPLEMENT ☐ EFFICACY SUPPLEMENT				
☐ LABELING SUPPLEMENT ☐ CHEMI	STRY MANUFACTURING AND	CONTROLS SUPPLEMENT	OTHER	
IF A SUBMISSION OF PARTIAL APPLICATION, PROVIDE LETTER DATE OF AGREEMENT TO PARTIAL SUBMISSION:				
IF A SUPPLEMENT, IDENTIFY THE APPROPRIATE CATEGORY CBE CBE-30 Prior Approval (PA)				
REASON FOR SUBMISSION				
Correspondence for Proposed Proprietary Name.				
PROPOSED MARKETING STATUS (check one) PRESCRIPTION PRODUCT (Rx) OVER THE COUNTER PRODUCT (OTC)				
NUMBER OF VOLUMES SUBMITTED $\underline{TWO}(2)$ THIS APPLICATION IS \boxtimes PAPER \square PAPER AND ELECTRONIC \square ELECTRONIC				
ESTABLISHMENT INFORMATION (Full establishment information should be provided in the body of the Application.) Provide locations of all manufacturing, packaging and control sites for drug substance and drug product (continuation sheets may be used if necessary). Include name, address, contact, telephone number, registration number (CFN), DMF number, and manufacturing steps and/or type of testing (e.g. Final dosage form, Stability testing) conducted at the site. Please indicate whether the site is ready for inspection or, if not, when it will be ready.				
Name, address, and phone number are listed above. Please contact Thomas G. Freund. Site is ready for inspection. Registration numbers are 1950222/KAN and 1937280/KAN.				
Cross References (list related License Applications	INDs NDAs PMAs 51	O(k)e IDFe RMFe and DMFe	referenced in the current application)	

AtroPen® Auto-Injector NDA 17-106, Pralidoxime Chloride Auto-Injector NDA 18-986, ATNAA NDA 21-175.						
This ap	pplication contains the following items: (Check	all that apply)				
	1. Index					
	2. Labeling (check one)					
	3. Summary (21 CFR 314.50 (c))					
	4. Chemistry section					
	A. Chemistry, manufacturing, and controls information (e.g., 21 CFR 314.50(d)(1); 21 CFR 601.2)					
	B. Samples (21 CFR 314.50 (e)(1); 21 CFR 601.2 (a)) (Submit only upon FDA's request)					
	C. Methods validation package (e.g., 21 CF					
	5. Nonclinical pharmacology and toxicology sec	tion (e.g., 21 CFR 314.50(d)(2); 21 CFR 601.2)				
		section (e.g., 21 CFR 314.50(d)(3); 21 CFR 601.2)				
	7. Clinical Microbiology (e.g., 21 CFR 314.50(d)					
	8. Clinical data section (e.g., 21 CFR 314.50(d)					
	9. Safety update report (e.g., 21 CFR 314.50(d)					
	10. Statistical section (e.g., 21 CFR 314.50(d)(6)					
	11. Case report tabulations (e.g., 21 CFR 314.50					
	12. Case report forms (e.g., 21 CFR 314.50 (f)(2)					
	13. Patent information on any patent which claim					
	14. A patent certification with respect to any pate	ent which claims the drug (21 U.S.C. 355 (b)(2) or (j)(2)(A))				
	15. Establishment description (21 CFR Part 600,	if applicable)				
	16. Debarment certification (FD&C Act 306 (k)(1)))				
	17. Field copy certification (21 CFR 314.50 (I)(3))				
	18. User Fee Cover Sheet (Form FDA 3397)					
	19. Financial Information (21 CFR Part 54)					
☒	20. OTHER (Specify) Correspondence for Proposed Proprietary Name.					
CERTIFI						
l agree to update this application with new safety information about the product that may reasonably affect the statement of contraindications, warnings, precautions, or adverse reactions in the draft labeling. I agree to submit safety update reports as provided for by regulation or as requested by FDA. If this application is approved, I agree to comply with all applicable laws and regulations that apply to approved applications, including, but not limited to the following: 1. Good manufacturing practice regulations in 21 CFR Parts 210, 211 or applicable regulations, Parts 606, and/or 820. 2. Biological establishment standards in 21 CFR Part 600. 3. Labeling regulations in 21 CFR Parts 201, 606, 610, 660, and/or 809. 4. In the case of a prescription drug or biological product, prescription drug advertising regulations in 21 CFR Part 202. 5. Regulations on making changes in application in FD&C Act section 506A, 21 CFR 314.71, 314.72, 314.97, 314.99, and 601.12. 6. Regulations on Reports in 21 CFR 314.80, 314.81, 600.80, and 600.81. 7. Local, state and Federal environmental impact laws. If this application applies to a drug product that FDA has proposed for scheduling under the Controlled Substances Act, I agree not to market the product until the Drug Enforcement Administration makes a final scheduling decision. The data and information in this submission have been reviewed and, to the best of my knowledge are certified to be true and accurate. Warning: A willfully false statement is a criminal offense, U.S. Code, title 18, section 1001.						
	IRE OF RESPONSIBLE OFFICIAL OR AGENT	TYPED NAME AND TITLE Thomas G. Freund, Director, Regulatory Affairs	DATE: 06/21/2006			

Public reporting burden for this collection of information is estimated to average 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to:

Telephone Number

314) 682-3156

ADDRESS (Street, City, State, and ZIP Code)

1945 Craig Road. St. Louis, MO 63146



Public Health Service

Food and Drug Administration Rockville, MD 20857

FILING COMMUNICATION

NDA 21-983

Meridian Medical Technologies, Inc. Attention: Thomas G. Freund Director, Regulatory Affairs 1945 Craig Road St. Louis, MO 63146

Dear Mr. Freund:

Please refer to your New Drug Application (NDA), dated March 24, 2006, received March 28, 2006, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for Atropine and Pralidoxime Chloride Auto-Injector.

We have completed our filing review and have determined that your application is sufficiently complete to permit a substantive review. Therefore, this application has been filed under section 505(b) of the Act on May 26, 2006 in accordance with 21 CFR 314.101(a).

At this time, we have not identified any potential filing review issues. Our filing review is only a preliminary evaluation of the application and is not indicative of deficiencies that may be identified during our review.

If you have questions, please call Jacqueline H. Ware, Pharm.D., at (301) 796-1160.

Sincerely,

{See appended electronic signature page}

Russell Katz, M.D.
Director
Division of Neurology Products
Office of Drug Evaluation I
Center for Drug Evaluation and Research

This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/

Russell Katz 6/9/2006 10:34:38 AM

DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE FOOD AND DRUG ADMINISTRATION		REQUEST FOR CONSULTATION				
TO (Division/Office): OPS, New Drug Microbiology Staff WO21 Rm. 3657 Attn: David Hussong and James McVey			ames McVey	FROM: Division of Neurology Products WO 22 Rm. 4350		
DATE May 8, 2006	IND NO.		NDA NO. 21-983	TYPE OF DOCUMENT New NDA	DATE OF DOCUMENT March 24, 2006	
NAME OF DRUG Atropine & Pralidoxime Autoinjector		ONSIDERATION	CLASSIFICATION OF DRUG	DESIRED COMPLETION DATE PDUFA Date: September 28, 2006 (Review Goal Date: August 24, 2006)		
NAME OF FIRM: Teva Neurosciences						
			REASON FO	R REQUEST		
			I. GEN	ERAL		
□ NEW PROTOCOL □ PRE-NDA MEETING □ PROGRESS REPORT □ END OF PHASE II MEET □ NEW CORRESPONDENCE □ RESUBMISSION □ DRUG ADVERTISING □ SAFETY/EFFICACY □ ADVERSE REACTION REPORT ■ PAPER NDA □ MANUFACTURING CHANGE/ADDITION □ CONTROL SUPPLEMEN □ MEETING PLANNED BY			END OF PHASE II MEETING RESUBMISSION SAFETY/EFFICACY PAPER NDA	☐ RESPONSE TO DEFICIENCY LETTER ☐ FINAL PRINTED LABELING ☐ LABELING REVISION ☐ ORIGINAL NEW CORRESPONDENCE ☐ FORMULATIVE REVIEW ☐ OTHER (SPECIFY BELOW):		
	II. BIOMETRICS					
STATISTICAL EVALUATION BRANC	CH			STATISTICAL APPLICATION BRANCH		
☐ TYPE A OR B NDA REVIEW ☐ END OF PHASE II MEETING ☐ CONTROLLED STUDIES ☐ PROTOCOL REVIEW ☐ OTHER (SPECIFY BELOW):				☐ CHEMISTRY REVIEW ☐ PHARMACOLOGY ☐ BIOPHARMACEUTICS ☐ OTHER (SPECIFY BELOW):		
			III. BIOPHAR	MACEUTICS		
☐ DISSOLUTION ☐ BIOAVAILABILTY STUDIES ☐ PHASE IV STUDIES				☐ DEFICIENCY LETTER RESPONSE ☐ PROTOCOL-BIOPHARMACEUTICS ☐ IN-VIVO WAIVER REQUEST		
IV. DRUG EXPERIENCE						
☐ PHASE IV SURVEILLANCE/EPIDEMIOLOGY PROTOCOL ☐ DRUG USE e.g. POPULATION EXPOSURE, ASSOCIATED DIAGNOSES ☐ CASE REPORTS OF SPECIFIC REACTIONS (List below) ☐ COMPARATIVE RISK ASSESSMENT ON GENERIC DRUG GROUP				☐ REVIEW OF MARKETING EXPERIENCE, DRUG USE AND SAFETY ☐ SUMMARY OF ADVERSE EXPERIENCE ☐ POISON RISK ANALYSIS		
V. SCIENTIFIC INVESTIGATIONS						
□ CLINICAL				☐ PRECLINICAL		
COMMENTS/SPECIAL INSTRUCTIONS: This new drug application provides for Atropine & Pralidoxime Autoinjector for use by EMS————————————————————————————————————						
SIGNATURE OF REQUESTER Jackie Ware; 301-796-1160; Jacqueline.ware@fda.hhs.gov				METHOD OF DELIVERY (Check one ☐ MAIL) ■ HAND	
SIGNATURE OF RECEIVER				SIGNATURE OF DELIVERER		

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Ware, Jacqueline H

warej@cder.fda.gov (email)

From: Sent: To: Cc: Subject:	Ware, Jacqueline H Thursday, January 05, 2006 3:57 PM 'Thomas.Freund@meridianmt.com' Ware, Jacqueline H FDA Comments re: tradename presubmission to NDA 21-983
Dear Tom, As we just discussed, follow September 29, 2005 to you	ving are DDMAC's comments regarding Meridian's proposed tradenamesubmitted on r preassigned NDA 21-983. The Division has reviewed these comments and agrees.
proposed trade name Atropine and pralidoxim indication is for treatme effectiveness. When brown the suffix of the suffix of the suggests that of the suggests of the suggest	parketing Advertising, and Communications (DDMAC) does not recommend and objects to the opecause it is overly fanciful, suggesting some unique effectiveness or composition. The are two chemical entities that are currently available. Furthermore, when considering the intrafter exposure to a nerve agent poisoning, the proposed trade name overstates the eaking this name down it contains to parts, most likely referring to and rally means. Therefore, the proposed trade name misleadingly an and or mitigating cations. Without substantial evidence to support that will treat all patients exposed to gent, the proposed trade name overstates the effectiveness of the drug product. R 201.10(c)(3) states that a proprietary name that implies that the drug or ingredient has some composition would be misleading, if the drug or ingredient is a common substance, the readily recognized when the drug or ingredient is listed by its established name. In addition, is that labeling or advertising can misbrand a product if misleading representations are made, aname or otherwise; this includes suggestions that a drug is better, more effective, useful in a product in the proposed trade name or patients, safer, has fewer, or lower incidence of, or less serious side effects or has been demonstrated by substantial evidence or substantial clinical experience. [21 U.S.C. S.C. 352(a) & (n); 21 CFR 202.1(e)(5)(i);(e)(6)(i)].
Sincerely, Jackie Ware	*********
Jacqueline H. Ware, Pharm Senior Regulatory Project N Division of Neurology Produ Center for Drug Evaluation 301-796-1160 (phone) 301-796-9842 (fax)	flanager ucts, WO22 Rm. 4350

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This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/

Jackie Ware 5/2/2006 01:32:35 PM CSO

Tradename comments emailed to firm on 1/5/06 after concurrence received from Drs. Katz & Bryan.