



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration
Silver Spring MD 20993

NDA 021648/S-009

SUPPLEMENT APPROVAL

Roxanne Laboratories, Inc.
c/o West-Ward Pharmaceuticals, Corp.
Attention: Chrysoula Koukoutsis
Manager, Drug Regulatory Affairs and Labeling
1809 Wilson Road
Columbus, OH 43228

Dear Ms. Koukoutsis:

Please refer to your Supplemental New Drug Application (sNDA) dated and received July 25, 2016 submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FDCA) for Digoxin 0.05mg/mL Oral Solution.

We also refer to our December 1, 2016 Approval letter for Supplement 9 (S-009). The labeling appended to the December 1st Approval letter contained a formatting error in Table 7.3, making some of the content unreadable. This letter corrects the error and supersedes the December 1, 2016 Approval letter. The date of the action remains December 1, 2016.

This supplemental new drug application provides for revisions to the approved label as follows (additions are shown as underlined text and deletions are shown as ~~striking through~~ text):

1. Under **DRUG INTERACTIONS**, the following text was added/deleted to/from the table in 7.3:

Antiarrhythmics	Dofetilide	Concomitant administration with digoxin was associated with a higher rate of torsades de pointes.
	Moricizine	<u>Reported to increase PR interval and QRS duration. There are reports of first degree atrioventricular block or bundle branch block developing with digitalis administration. The known effects of moricizine on calcium conductance may explain the effects on atrioventricular node conduction.</u>
	Sotalol	Proarrhythmic events were more common in patients receiving sotalol and digoxin than on either alone; it is not clear whether this represents an interaction or is related to the presence of CHF, a known risk factor for proarrhythmia, in patients receiving digoxin.
Parathyroid Hormone Analog	Teriparatide	Sporadic case reports have suggested that hypercalcemia may predispose patients to digitalis toxicity. Teriparatide transiently increases serum calcium.
Thyroid Supplement	Thyroid	Treatment of hypothyroidism in patients taking digoxin may increase the dose requirements of digoxin.
Sympathomimetics	Epinephrine	Can increase the risk of cardiac arrhythmias.
	Norepinephrine	
	Dopamine	

Neuromuscular Blocking Agents	Succinylcholine	May cause sudden extrusion of potassium from muscle cells causing arrhythmias in patients taking digoxin.
Supplements	Calcium	If administered rapidly by intravenous route, can produce serious arrhythmias in digitalized patients.
Beta-adrenergic blockers and calcium channel blockers	Additive effects on AV node conduction can result in complete heart block.	
<u>Hyperpolarization-Activated Cyclic Nucleotide-Gated Channel Blocker</u>	Ivabradine can increase the risk of bradycardia.	

2. Several editorial revisions were noted (removal of the term “USP” from HIGHLIGHTS, route of administration added).
3. The product contact information was updated to reflect West-Ward Pharmaceuticals Corp.
4. The information regarding nitrendipine was deleted from Table 7.2.
5. The revision date was updated.

APPROVAL & LABELING

We have completed our review of this supplemental application and it is approved, effective on the date of this letter, for use as recommended in the enclosed, agreed-upon labeling text.

CONTENT OF LABELING

As soon as possible, but no later than 14 days from the date of this letter, submit the content of labeling [21 CFR 314.50(l)] in structured product labeling (SPL) format using the FDA automated drug registration and listing system (eLIST), as described at <http://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/default.htm>. Content of labeling must be identical to the enclosed labeling (text for the package insert, text for the patient package insert, Medication Guide), with the addition of any labeling changes in pending “Changes Being Effectuated” (CBE) supplements, as well as annual reportable changes not included in the enclosed labeling.

Information on submitting SPL files using eList may be found in the guidance for industry titled “SPL Standard for Content of Labeling Technical Qs and As at <http://www.fda.gov/downloads/DrugsGuidanceComplianceRegulatoryInformation/Guidances/UCM072392.pdf>

The SPL will be accessible from publicly available labeling repositories.

Also within 14 days, amend all pending supplemental applications that include labeling changes for this NDA, including CBE supplements for which FDA has not yet issued an action letter, with the content of labeling [21 CFR 314.50(l)(1)(i)] in MS Word format, that includes the changes approved in this supplemental application, as well as annual reportable changes and annotate each change. To facilitate review of your submission, provide a highlighted or marked-up copy that shows all changes, as well as a clean Microsoft Word version. The marked-up copy should provide appropriate annotations, including supplement number(s) and annual report date(s).

REPORTING REQUIREMENTS

We remind you that you must comply with reporting requirements for an approved NDA (21 CFR 314.80 and 314.81).

If you have any questions, please call:

Lori Anne Wachter, RN, BSN, RAC
Regulatory Project Manager for Safety
(301) 796-3975

Sincerely,

{See appended electronic signature page}

Mary Ross Southworth, PharmD.
Deputy Director for Safety
Division of Cardiovascular and Renal Products
Office of Drug Evaluation I
Center for Drug Evaluation and Research

ENCLOSURE(S):
Content of Labeling

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

/s/

MARY R SOUTHWORTH
12/01/2016