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*APPLICATION NUMBER:*  
**21-591**

**MEDICAL REVIEW(S)**

# MEDICAL OFFICER REVIEW

Division of Metabolic and Endocrine Drug Products (HFD-510)

APPLICATION #:	21591	APPLICATION TYPE:	NDA
SPONSOR:	Ranbay	PROPRIETARY NAME:	Metformin
CATEGORY OF DRUG:	Antidiabetic	USAN / Established Name:	Riomet
MEDICAL REVIEWER:	Robert I Misbin..	ROUTE:	Oral (liquid)
		REVIEW DATE:	Sep 5, 2003

## SUBMISSIONS REVIEWED IN THIS DOCUMENT

Document Date:	CDER Stamp Date:	Submission Type:	Comments:
Nov 13, 2002	Nov 14, 2002		

This is a 505b2 application for a metformin oral solution, 100 mg/ml. No clinical data were submitted. The basis of approval is bioequivalence with Glucophage brand of metformin.

**This application can be approved provided that the Sponsor revises the labeling and**

Signed: Medical Reviewer: Robert I Misbin MD Date: Sep 5, 2003

Medical Team Leader: \_\_\_\_\_ Date: \_\_\_\_\_

This is a 505b2 application for a metformin oral solution, 100 mg/ml. No clinical data were submitted. The basis of approval is bioequivalence with Glucophage brand of metformin. Riomet solution appears to give the same blood levels and AUC as 1000 mg metformin tablets (see table)

	C max ( ng/ml)	AUC 0-inf (ng.h/mL)	T max ( h)
Fasting			
Riomet solution	1540	9070	2.2
Glucophage tablets	1885	11100	2.5
Test/Ref	83 +/- 17%	83 +/- 16%	
FED State			
Riomet	1235	8950	4.1
Glucophage	1361	9307	3.7
Test/Ref	93 +/- 16%	98 +/- 15%	

The regulatory documents submitted by the Sponsor are satisfactory:

- 1 Debarment certification: letter dated Sep 4, 2002 states that the Sponsor has not used any person debarred under section 306 in connection with this NDA
- 2 The Sponsor on 11/13/02 signed form 0910-036 and states that the clinical investigator who participated in the study had no proprietary interest in the product ( 21 CFR 54.2b) and were not recipients of payment of other sorts (21 CFR 54.2f).

Labeling and packaging:

The label duplicates the Glucophage label and also gives pharmacokinetic data showing that Riomet and Glucophage are bioequivalent. Data regarding a "food effect" for Riomet are also given. This is appropriate labeling for a 505b2 product.

Recommendation:

This application can be approved provided that the Sponsor agrees to include as described above.

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this page is the manifestation of the electronic signature.**  
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/s/  
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Robert Misbin  
9/5/03 09:54:40 AM  
MEDICAL OFFICER

David Orloff  
9/8/03 09:49:05 AM  
MEDICAL OFFICER

Concur-with AP. Labeling revised with PK data from  
Riomet solution, showing bioequivalence to tablets. Data from  
studies using metformin tablets included without using the  
word "tablets" to avoid confusion. Volume and mg  
included in dosing info.