CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

75830

BIOEQUIVALENCY REVIEW(S)

OFFICE OF GENERIC DRUGS
DIVISION OF BIOEQUIVALENCE

ANDA # 75-830 SPONSOR : Faulding Pharmaceutical Co.

DRUG AND DOSAGE FORM : Milrinone Lactate Injection

STRENGTH(S) : 1 mg/mL, 50 mL vials

TYPES OF STUDIES : N/A

CLINICAL STUDY SITE(S) : N/A

ANALYTICAL SITE(S) : N/A

STUDY SUMMARY : The waiver is granted

DISSOLUTION : N/A

DSI INSPECTION STATUS

Inspection needed: YES / (NO)	Inspection status:	Inspection results:
First Generic _____	Inspection requested: (date)	
New facility _____	Inspection completed: (date)	
For cause _____		
Other _____		

PRIMARY REVIEWER : Moheb H. Makary, Ph.D. BRANCH : III

INITIAL : MHM DATE : 8/16/01

TEAM LEADER : Barbara M. Davit, Ph.D. BRANCH : III

INITIAL : BMD DATE : 8/6/01

DIRECTOR, DIVISION OF BIOEQUIVALENCE : DALE P. CONNER, Pharm. D.

for INITIAL : /S/ DATE : 8/17/2001

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OFFICE OF GENERIC DRUGS
DIVISION OF BIOEQUIVALENCE

ANDA # 75-830 SPONSOR : Faulding Pharmaceutical Co.

DRUG AND DOSAGE FORM : **Milrinone Lactate Injection**

STRENGTH(S) : 1 mg/mL, 10 mL and 20 mL vials

TYPES OF STUDIES : N/A

CLINICAL STUDY SITE(S) : N/A

ANALYTICAL SITE(S) : **N/A**

STUDY SUMMARY : The waiver is granted

DISSOLUTION : N/A

DSI INSPECTION STATUS

Inspection needed: YES / (NO)	Inspection status:	Inspection results:
First Generic no	Inspection requested: (date)	
New facility ____	Inspection completed: (date)	
For cause ____		
Other ____		

PRIMARY REVIEWER : Moheb H. Makary, Ph.D. BRANCH : III

INITIAL : MHM DATE : 6/8/00

TEAM LEADER : Barbara M. Davit, Ph.D. BRANCH : III

INITIAL : BMD DATE : 6/8/00

DIRECTOR, DIVISION OF BIOEQUIVALENCE : DALE P. CONNER, Pharm. D.

fw **INITIAL :** DPC **DATE :** 6/27/2000

Milrinone Lactate Injection
1 mg Base/mL, 50 mL Vials
ANDA #75-830
Reviewer: Moheb H. Makary
W 75830W.D00

Faulding Pharmaceutical
Cranford, NJ
Submission Date:
December 1, 2000

Review of an Amendment

I. Objective:

In this amendment the firm has requested a waiver of bioequivalence study requirements for its product Milrinone Lactate Injection, 1 mg/mL, 50 mL Vials. The innovator product is Primacor® Injection 1 mg/mL; 10 mL, 20 mL and 50 mL Vials, manufactured by Sanofi Winthrop.

Previously, Faulding requested a waiver of bioequivalence study requirements for its Milrinone Lactate Injection, 1 mg/mL, 10 mL and 20 mL Vials (ANDA #75-830, submission dated March 31, 2000). The waiver was granted. The formulation of Milrinone Lactate, 1 mg/mL, 10 mL and 20 mL Vials is the same as for Milrinone Lactate Injection, 1 mg/mL, 50 mL Vials.

Milrinone Lactate Injection is indicated for the short-term intravenous therapy of congestive heart failure.

II. Formulation: **(Not to be released under FOI)**

The formulations of Faulding's Milrinone Lactate Injection and Sanofi Winthrop's Primacor^{R} Injection, 1 mg/mL are shown below:

Ingredient Name	Faulding	Sanofi Winthrop
MILRINONE LACTATE	EQ 1MG BASE/ML	EQ 1MG BASE/ML
DEXTROSE, ANHYDROUS	47MG/ML	47MG/ML
LACTIC ACID	MG/ML	*
SODIUM HYDROXIDE	ADJUST pH	ADJUST pH
LACTIC ACID**	ADJUST pH	ADJUST pH
WATER FOR INJECTION, USP	QS	QS

* The total concentration of lactic acid can vary between 0.95 mg/mL and 1.29 mg/mL.

** If necessary, used to adjust pH.

III. Comments:

1. The active and inactive ingredients and their concentrations for the test product are the same as those of the innovator's Primacor[R] Injection 1 mg/mL, manufactured by Sanofi and Winthrop.

2. The waiver of *in vivo* bioequivalence study requirements may be granted based on 21 CFR 320.22(b)(1).

IV. Recommendation:

The Division of Bioequivalence agrees that the information submitted by Faulding Pharmaceutical Co., demonstrates that Milrinone Lactate Injection, 1 mg/mL, 50 mL Vials, falls under 21 CFR 320.22 (b)(1). The waiver of *in vivo* bioequivalence study requirements for the test product is granted. From the bioequivalence point of view, the Division of Bioequivalence deems the test injectable formulation 1 mg/mL to be bioequivalent to Primacor[R] Injectable, 1 mg/mL, manufactured by Sanofi and Winthrop.

The firm should be informed of the above recommendation.

/S/

Moheb H. Makary, Ph.D.
Division of Bioequivalence
Review Branch III

BMS 8/3/01

RD INITIALLED BDAVIT /S/
FT INITIALLED BDAVIT Date: 8/6/01

Concur: /S/ Date: 8/17/2001

Dale P. Conner, Pharm.D.
Director
Division of Bioequivalence

Mmakary/7-24-01, 8-6-01, 75830W.D00
cc: ANDA #75-830, original, HFD-658(Makary), Drug File, Division File.

Milrinone Lactate Injection
1 mg Base/mL; 10 mL and 20 mL Vials
ANDA #75-830
Reviewer: Moheb H. Makary
W 75830W.300

Faulding Pharmaceutical
Cranford, NJ
Submission Date:
March 31, 2000

Review of a Waiver Request

I. Objective:

The firm has requested a waiver of bioequivalence study requirements for its product Milrinone Lactate Injection, 1 mg/mL; 10 mL and 20 mL Vials. The innovator product is Primacor® Injection 1 mg/mL; 10 mL and 20 mL Vials, manufactured by Sanofi Winthrop.

Milrinone Lactate Injection is indicated for the short-term intravenous therapy of congestive heart failure.

II. Formulation: **(Not to be released under FOI)**

The formulations of Faulding's Milrinone Lactate Injection and Sanofi Winthrop's Primacor[R] Injection, 1 mg/mL are shown below:

Ingredient Name	Faulding	Sanofi Winthrop
MILRINONE LACTATE	EQ 1MG BASE/ML	EQ 1MG BASE/ML
DEXTROSE, ANHYDROUS	47MG/ML	47MG/ML
LACTIC ACID	MG/ML	*
SODIUM HYDROXIDE	ADJUST pH	ADJUST pH
LACTIC ACID**	ADJUST pH	ADJUST pH
WATER FOR INJECTION, USP	QS	QS

* The total concentration of lactic acid can vary between 0.95 mg/mL and 1.29 mg/mL.

** If necessary, used to adjust pH.

III. Comments:

1. The active and inactive ingredients and their concentrations for the test product are the same as those of the innovator's Primacor[R] Injection 1 mg/mL, manufactured by Sanofi and Winthrop.

2. The waiver of *in vivo* bioequivalence study requirements may be granted based on 21 CFR 320.22(b)(1).

IV. Recommendation:

The Division of Bioequivalence agrees that the information submitted by Faulding Pharmaceutical Co., demonstrates that Milrinone Lactate Injection, 1 mg/mL; 10 mL and 20 mL Vials, falls under 21 CFR 320.22 (b)(1). The waiver of *in vivo* bioequivalence study requirements for the test product is granted. From the bioequivalence point of view, the Division of Bioequivalence deems the test injectable formulation 1 mg/mL to be bioequivalent to Primacor^{R} Injectable, 1 mg/mL, manufactured by Sanofi and Winthrop.

The firm should be informed of the above recommendation.

/S/

Moheb H. Makary, Ph.D.
Division of Bioequivalence
Review Branch III

RD INITIALLED BDAVIT 6/7/00
FT INITIALLED BDAVIT /S/ Date: 6/8/00

Concur: /S/ Date: 6/27/2000
for Dale P. Conner, Pharm.D.
Director
Division of Bioequivalence

Mmakary/4-27-00, 6-8-00, 75830W.300
cc: ANDA #75-830, original, HFD-658(Makary), Drug File, Division File.

BIOEQUIVALENCY COMMENTS TO BE PROVIDED TO THE APPLICANT

ANDA: 75-830 APPLICANT: Faulding Pharmaceutical Co.

DRUG PRODUCT: Milrinone Lactate Injection, 1 mg/mL, 50 mL Vials

The Division of Bioequivalence has completed its review and has no further questions at this time.

Please note that the bioequivalency comments provided in this communication are preliminary. These comments are subject to revision after review of the entire application, upon consideration of the chemistry, manufacturing and controls, microbiology, labeling, or other scientific or regulatory issues. Please be advised that these reviews may result in the need for additional bioequivalency information and/or studies, or may result in a conclusion that the proposed formulation is not approvable.

Sincerely yours,

/S/

Dale P. Conner, Pharm. D.
Director
Division of Bioequivalence
Office of Generic Drugs
Center for Drug Evaluation and Research