

# CENTER FOR DRUG EVALUATION AND RESEARCH

## Approval Package for:

***APPLICATION NUMBER:***  
**NDA 20-164/S-032**

***Name:*** Lovenox® (Enoxaparin Sodium) Injection

***Sponsor:*** Rhone-Poulenc Rorer Pharmaceuticals

***Approval Date:*** January 27, 2000

# CENTER FOR DRUG EVALUATION AND RESEARCH

***APPLICATION NUMBER:***  
**NDA 20-164/S-032**

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*APPLICATION NUMBER:*  
**NDA 20-164/S-032**

**APPROVAL LETTER**

NDA 20-164/S-032

Aventis  
Attention: Mr. Dennis Jurgens  
500 Arcola Road  
P.O. box 1200  
Collegeville, PA 19426-0107

Dear Mr. Jurgens:

Please refer to your supplemental new drug application dated September 24, 1999, received September 27, 1999, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for Lovenox® (enoxaparin sodium) Injection.

This supplemental new drug application provides for qualification of an additional manufacturing site, Laboratoires FISOONS SA, Boulevard Industriel, 76 580 LE TRAIT, France, for Lovenox 30 mg/0.3 mL and 40 mg/0.4 mL prefilled syringes.

We have completed the review of this supplemental application and it is approved.

We remind you that you must comply with the requirements for an approved NDA set forth under 21 CFR 314.80 and 314.81.

If you have any questions, contact Karen Oliver, Regulatory Health Project Manager, at (301) 827-7457.

Sincerely,

Liang Zhou, Ph.D.  
Chemistry Team Leader for the  
Division of Gastrointestinal and Coagulation Drug  
Products, (HFD-180)  
DNDC II, Office of New Drug Chemistry  
Center for Drug Evaluation and Research

cc:

Archival NDA 20-164/S-032

HFD-180/Div. Files

HFD-180/K.Oliver

HFD-180/L.Zhou

HFD-180/J.Sieczkowski

HFD-095/DDMS-IMT

HFD-820/DNDC Division Director

DISTRICT OFFICE

Drafted by: KO/January 21, 2000

final: KO/01/21/00/c:\data\mydocuments\NDA20164-S-032-01-21-99-AP.doc

APPROVAL (AP)

**CENTER FOR DRUG EVALUATION AND RESEARCH**

***APPLICATION NUMBER:***  
**NDA 20-164/S-032**

**CHEMISTRY REVIEW**

CHEMIST'S REVIEW #1		1. Organization: HFD-180		2. NDA Number: 20-164	
3. Name and Address of Applicant (City & State): Rhône-Poulenc Rorer Pharmaceuticals 500 Arcola Road, P.O. Box 1200 Collegeville, PA				4. AF Number:	
				Supplement(s)	
6. Name of Drug: Lovenox® Injection		7. Nonproprietary Name: enoxaparin sodium		Number(s)   Date(s)	
				SCM-032   24 SEP 1999	
8. Supplement Provides for: The manufacture of 30 and 40 MG Lovenox® prefilled syringes at a new site, Laboratories Fisons SA, 76580 Le Trait, France, using a _____ manufacturing method which includes among the changes, a change to the equipment _____				9. Amendments and Other (Reports, etc.) Dates:	
[ ]					
10. Pharmacological Category: anticoagulant		11. How Dispensed: Rx XX OTC		12. Related IND/NDA/DMF(s):	
13. Dosage Form: Injection (SVS)		14. Potency: 30, 40, 60, 80, 100mg/ prefilled syringes 100mg/ML			
15. Chemical Name and Structure: See NDA Chemistry Review #1.				6. Records and Reports:	
				Current Yes No	
				Reviewed Yes No	
17. Comments: See Review Notes. cc: NDA 20-164/S-032 HFD-180/Div File/NDA 20-164 HFD-181/CSO/K.Oliver HFD-180/L.Talarico HFD-180/J.Sieczkowski R/D init by: L.Zhou dob DRAFT 1-19-00/Word: c:\wordfiles\chem\S\20164032.1js					
18. Conclusions and Recommendations: The proposed supplemental application changes appear to be adequately supported by the submitted information and the supplement is recommended to be approved. The CSO should prepare an approval letter for the Team Leader's signature.					
19. Reviewer					
Name: Joseph Sieczkowski, Ph.D.		Signature		Date Completed: January 19, 2000	

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information from

CHEMISTRY REVIEW #1

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**OTHER:**

A. Labeling.

COMMENT:

The labeling will remain the same in that Lovenox Injection Pre-filled will be manufactured in France (Fisons, Le Trait, France and Rhone-Poulenc Rorer, Maisons-Alfort, France).

No change to labeling.

ADEQUATE

B. Establishment Inspection.

Laboratoire Fisons SA, Le Trait, France. Acceptable by S. Ferguson (HFD-324) dated December 7, 1999. The \_\_\_\_\_ stability storage site would not be inspected by the Field as noted per Compliance.

**APPEARS THIS WAY  
ON ORIGINAL**

**CENTER FOR DRUG EVALUATION AND RESEARCH**

*APPLICATION NUMBER:*  
**NDA 20-164/S-032**

**MICROBIOLOGY REVIEW**

REVIEW FOR HFD-180  
MICROBIOLOGIST'S REVIEW #1 OF SUPPLEMENT  
OFFICE OF NEW DRUG CHEMISTRY  
MICROBIOLOGY REVIEW STAFF

January 13, 2000

NDA/Supplement Numbers 20-164/SCM-032

Document Date: September 24, 1999

Date Assigned for Review: October 28, 1999

Amendments and Others: none

Name and Address of Applicant: Rhone-Poulenc Rorer  
500 Arcola Road  
P.O. Box 1200  
Collegeville, PA 19426-0107

Name of Drug: Lovenox® (enoxaparin sodium) Injection 30mg/0.3mL and 40mg/0.4mL

Supplement Provides For: An additional manufacturing site in Le Trait, France.

Pharmacological Category: Anti-coagulant

Dosage Form: Prefilled 0.5 cc Hypak® syringes (30mg and 40mg), and 1 cc Hypak® syringes (90mg, 120mg and 150mg, subjects of S-030) and glass ampules (30mg and 40mg).

Related Documents: DMF \_\_\_\_\_

Comments: The approved application includes manufacture of the 30 and 40 mg strengths in 0.5cc Hypak® syringes and greater strengths in 1cc Hypak® syringes at RPR in Maisons-Alfort, France, and supplement 007 provided for ampules manufactured at RPR in Dagenham, UK.

The current supplement provides for manufacture of the 30 and 40mg strengths in Hypak® syringes at RPR in LeTrait, France. The submission includes the assertion that the \_\_\_\_\_ was inspected as part of a preapproval FDA inspection conducted in May 1999. However, the drug product that was the subject of that inspection was not identified and could not be used as a reference.

Conclusions and Recommendations: The submission is recommended for APPROVAL.

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David Hussong, Ph.D.

cc:

Original NDA 20-164/SCM-032  
HFD 160/Consult File  
HFD 180/CSO/K. Oliver  
HFD 180/Chemist/J. Sieczkowski  
HFD 805/D. Hussong

Drafted by: D. Hussong, 01/13/2000  
R/D initialed by: P. Cooney

Filename, d:\nda\s\20-164r1.s32.doc

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MICROBIOLOGY REVIEW #1

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**CENTER FOR DRUG EVALUATION AND RESEARCH**

*APPLICATION NUMBER:*  
**NDA 20-164/S-032**

**ADMINISTRATIVE and CORRESPONDENCE**  
**DOCUMENTS**

NDA 20-164/S-032

Rhone-Poulenc Rorer Pharmaceuticals Inc.  
Attention: Mr. Dennis Jurgens  
500 Arcola Road  
P.O. Box 1200  
Collegeville, PA 19426-0107

Dear Mr. Jurgens:

We acknowledge receipt of your manufacturing supplemental application submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for the following:

Name of Drug Product: Lovenox® (enoxaparin sodium) Injection

NDA Number: 20-164

Supplement Number: S-032

Date of Supplement: September 24, 1999

Date of Receipt: September 27, 1999

This supplement proposes the following change: qualification of an additional manufacturing site, Laboratoires FISOONS SA, Boulevard Industriel, 76 580 LE TRAIT, France, for Lovenox® 30 mg/0.3 mL and 40 mg/0.4 mL prefilled syringes.

Unless we notify you within 60 days of our receipt date that the application is not sufficiently complete to permit a substantive review, this application will be filed under section 505(b) of the Act on November 26, 1999 in accordance with 21 CFR 314.101(a). If the application is filed, the primary user fee goal date will be January 27, 2000, and the secondary user fee goal date will be March 27, 2000.

Please cite the application number listed above at the top of the first page of any communications concerning this application. All communications concerning this supplemental application should be addressed as follows:

U.S. Postal/Courier/Overnight Mail:

Food and Drug Administration  
Center for Drug Evaluation and Research  
Division of Gastrointestinal and Coagulation Drug Products, HFD-180  
Attention: Division Document Room  
5600 Fishers Lane  
Rockville, Maryland 20857

If you have any questions, contact me at (301) 827-7310.

Sincerely,

Karen Oliver, RN, MSN  
Regulatory Health Project Manager  
Division of Gastrointestinal and Coagulation Drug  
Products  
Office of Drug Evaluation III  
Center for Drug Evaluation and Research

cc:

Archival NDA 20-164/032

HFD-180/Div. Files

HFD-180/K.Oliver

HFD-180/L.Zhou

HFD-180/J.Sieczkowski

DISTRICT OFFICE

Drafted by: KO/October 5, 1999

filename: KO/10/05/99/c:\data\mydocuments\NDA20164-S-032-10-05-99-ack.doc

SUPPLEMENT ACKNOWLEDGEMENT (AC)