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

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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 FISON S.A, 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)
APPLICATION NUMBER:
NDA 20-164/S-032

CHEMISTRY REVIEW
<table>
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<th><strong>CHEMIST'S REVIEW #1</strong></th>
<th><strong>1. Organization:</strong> HFD-180</th>
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<tr>
<td><strong>3. Name and Address of Applicant (City &amp; State):</strong></td>
<td><strong>2. NDA Number:</strong> 20-164</td>
</tr>
<tr>
<td>Rhone-Poulenc Rorer Pharmaceuticals</td>
<td><strong>4. AF Number:</strong></td>
</tr>
<tr>
<td>500 Arcola Road, P.O. Box 1200</td>
<td><strong>Supplement(s):</strong></td>
</tr>
<tr>
<td>Collegeville, PA</td>
<td><strong>Number(s) Date(s):</strong></td>
</tr>
<tr>
<td><strong>6. Name of Drug:</strong></td>
<td><strong>SCM-032 24 SEP 1999</strong></td>
</tr>
<tr>
<td>Lovenox® Injection</td>
<td><strong>7. Nonproprietary Name:</strong></td>
</tr>
<tr>
<td></td>
<td>enoxaparin sodium</td>
</tr>
<tr>
<td><strong>8. Supplement Provides for:</strong></td>
<td><strong>9. Amendments and Other</strong></td>
</tr>
<tr>
<td>The manufacture of 30 and</td>
<td>(Reports, etc.) Dates:</td>
</tr>
<tr>
<td>40 MG Lovenox® prefilled syringes at a new site,</td>
<td></td>
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<tr>
<td>Laboratories Fisons SA, 76580 Le Trait, France, using</td>
<td></td>
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<td>________________________________________</td>
<td></td>
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<tr>
<td>___________ manufacturing method which includes among</td>
<td></td>
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<tr>
<td>the changes, a change to the equipment _____________</td>
<td></td>
</tr>
<tr>
<td><strong>10. Pharmacological Category:</strong></td>
<td><strong>11. How Dispensed:</strong></td>
</tr>
<tr>
<td>anticoagulant</td>
<td>Rx XX OTC</td>
</tr>
<tr>
<td><strong>13. Dosage Form:</strong></td>
<td><strong>14. Potency:</strong></td>
</tr>
<tr>
<td>Injection (SVS)</td>
<td>30,40,60,80,</td>
</tr>
<tr>
<td></td>
<td>100mg/</td>
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<tr>
<td></td>
<td>prefilled</td>
</tr>
<tr>
<td></td>
<td>syringes</td>
</tr>
<tr>
<td></td>
<td>100mg/ML</td>
</tr>
<tr>
<td><strong>15. Chemical Name and Structure:</strong></td>
<td><strong>16. Records and Reports:</strong></td>
</tr>
<tr>
<td>See NDA Chemistry Review #1.</td>
<td>Current</td>
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<tr>
<td></td>
<td>Yes No</td>
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<tr>
<td></td>
<td>Reviewed</td>
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<tr>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td><strong>17. Comments:</strong> See Review Notes.</td>
<td></td>
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<tr>
<td>cc: NDA 20-164/S-032</td>
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<tr>
<td>HFD-180/Div File/NDA 20-164</td>
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<tr>
<td>HFD-181/CSO/K Oliver</td>
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<tr>
<td>HFD-180/L.Talarico</td>
<td></td>
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<tr>
<td>HFD-180/J.Sieczkowski</td>
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<tr>
<td>R/D init by: L.Zhou</td>
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<tr>
<td>dob DRAFT 1-19-00/Word: c:\wordfiles\chem\S\20164032.1js</td>
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<tr>
<td><strong>18. Conclusions and Recommendations:</strong> The proposed supplemental application</td>
<td></td>
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<tr>
<td>changes appear to be adequately supported by the submitted information and the</td>
<td></td>
</tr>
<tr>
<td>supplement is recommended to be approved. The CSO should prepare an approval</td>
<td></td>
</tr>
<tr>
<td>letter for the Team Leader's signature.</td>
<td></td>
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<tr>
<td><strong>19. Reviewer</strong></td>
<td><strong>Signature</strong></td>
</tr>
<tr>
<td>Name: Joseph Sieczkowski, Ph.D.</td>
<td><strong>Date Completed:</strong></td>
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<td></td>
<td>January 19, 2000</td>
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</tbody>
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of trade secret and/or
confidential commercial
information from

CHEMISTRY REVIEW #1
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.
Laboratore' 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.
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-Alfôrt, 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.

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
Redacted 7 page(s)
of trade secret and/or confidential commercial information from
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 FISONSA S.A., 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)