Product Quality Microbiology Review

06 February 2012

NDA: 21-746/N-000

Drug Product Name

Proprietary: Surfaxin®
Non-proprietary: lucinactant

Review Number: 5

Dates of Submission(s) Covered by this Review

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Submission History (for amendments only)

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Applicant/Sponsor

Name: Discovery Laboratories, Inc.
Address: Warrington, PA
Representative: Marjorie Hurley, Pharm D.
Telephone: 215-488-9360

Name of Reviewer: Denise A. Miller

Conclusion: The NDA is recommended for approval from microbiology product quality standpoint.
Product Quality Microbiology Data Sheet

A. 1. TYPE OF SUBMISSION: Resubmitted New Drug Application

2. SUBMISSION PROVIDES FOR: The formulation and filling

3. MANUFACTURING SITE: Totowa, NJ

4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:
   - Dosage Form: Sterile liquid
   - Route of Administration: intra-tracheal
   - Strength/Potency: 30mg/mL, 8.5mL/vial

5. METHOD (S) OF STERILIZATION: Sterile filtration

6. PHARMACOLOGICAL CATEGORY: Treatment of Respiratory Distress Syndrome

B. SUPPORTING/RELATED DOCUMENTS: None

C. REMARKS: The consult requests a review of the fifth submission of NDA 21-746 for the drug product Surfaxin®.

filename: N021746N000R5.doc
Executive Summary

I. Recommendations

A. Recommendation on Approvability – The application is recommended for approval.

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable - NA

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The drug product is manufactured

B. Brief Description of Microbiology Deficiencies – None

C. Assessment of Risk Due to Microbiology Deficiencies – NA

III. Administrative

A. Reviewer's Signature

Denise A. Miller
Reviewer, OPS/NDMS

B. Endorsement Block

Stephen E. Langille, Ph.D.
Senior Microbiologist, OPS/NDMS

C. CC Block

NA

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/s/

DENISE A MILLER
02/07/2012

STEPHEN E LANGILLE
02/07/2012
Product Quality Microbiology Review

March 09, 2009

NDA: 21-746 AZ

Drug Product Name
   Proprietary: Surfaxin®
   Non-proprietary: lucinactant

Review Number: 4

Dates of Submission(s) Covered by this Review

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Applicant/Sponsor
   Name: Discovery Laboratories, Inc.
   Address: Warrington, PA
   Representative: Marjorie Hurley, Pharm D.
   Telephone: 215-488-9360

Name of Reviewer: Vinayak B. Pawar, Ph.D.

Conclusion: The NDA is recommended for approval from microbiology product quality standpoint.
Product Quality Microbiology Data Sheet

A. 1. TYPE OF SUPPLEMENT: NA

2. APPLICATION PROVIDES FOR: Resubmitted New Drug Application

3. MANUFACTURING SITE: Totowa, NJ

4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY: 30mg/mL, 8.5mL/vial, intratracheal

5. METHOD (S) OF STERILIZATION: 

6. PHARMACOLOGICAL CATEGORY: Treatment of Respiratory Distress Syndrome

B. SUPPORTING/RELATED DOCUMENTS: None

C. REMARKS: The consult requests a review of the fourth submission of NDA 21-746 for the drug product Surfaxin®. Three volumes of the application containing the responses to deficiencies cited in Review # 3 were submitted for review. Since Discovery assumed direct control of Laureate Pharma, during the last review cycle, it no longer maintains DMF. No IQA was posted for the resubmission.

filename: C:\my documents\review\NDA\N021746R4
Executive Summary

I. Recommendations

A. Recommendation on Approvability – The application is recommended for approval.

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable - NA

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The drug product is manufactured

B. Brief Description of Microbiology Deficiencies – See section H.

C. Assessment of Risk Due to Microbiology Deficiencies – See section H.

III. Administrative

A. Reviewer's Signature

Vinayak B. Pawar, Ph.D.
Reviewer, CDER/OPS/NDMS

B. Endorsement Block

David Hussong, Ph.D.
Assoc. Director., CDER/OPS/NDMS

C. CC Block

NA

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/s/
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Vinayak Pawar  
3/24/2009 04:38:22 PM  
MICROBIOLOGIST

The NDA is recommended for approval.

David Hussong  
3/24/2009 05:17:16 PM  
MICROBIOLOGIST
I concur with the reviewer’s recommendation for approval of this new drug application.
Product Quality Microbiology Review

21 April 2008

NDA: 21-746 Resubmission

Drug Product Name
Proprietary: Surfaxin®
Non-proprietary: lucinactant
Drug Product Priority Classification: S1

Review Number: 3

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Applicant/Sponsor
Name: Discovery Laboratories, Inc.
Address: Warrington, PA
Representative: Marjorie Hurley, Pharm D.
Telephone: 215-488-9360

Name of Reviewer: Vinayak B. Pawar, Ph.D.

Conclusion: The application is approvable from microbiology standpoint pending resolution of the issues cited in Section H of this review.
Product Quality Microbiology Data Sheet

A.  1. TYPE OF SUPPLEMENT: NA

2. APPLICATION PROVIDES FOR: Resubmitted New Drug Application

3. MANUFACTURING SITE: Totowa, NJ

4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY: 30mg/mL, intratracheal

5. METHOD (S) OF STERILIZATION: [Redacted]

6. PHARMACOLOGICAL CATEGORY: Treatment of Respiratory Distress Syndrome

B. SUPPORTING/RELATED DOCUMENTS: DMF [Redacted]

C. REMARKS: The consult requests a review of a resubmitted NDA 21-746 for the drug product Surfaxin®. The resubmission contained several volumes of the application. For the past review cycles, Discovery Laboratories manufactured the drug product at Laureate Pharma Inc., a contract manufacturing site. However, in an official letter dated January 2006 from Laureate Pharma Inc. (the DMF holder) acknowledged the transfer of ownership of this facility to Discovery Laboratories. Thereafter, Discovery Laboratory resubmitted the NDA (letter dated October 31, 2007) as the manufacturer of Surfaxin®. The firm claims that this resubmission is a complete response to the deficiencies cited in the Agency’s action letter dated 31 March 2006. When Discovery was asked how the deficiencies cited in the DMF will be addressed, the firm responded in a letter [dated February 21, 2008 addressed to the reviewer] as follows: "Since Discovery assumed direct control of Laureate Pharma, it is no longer necessary to maintain DMF [Redacted]. Accordingly, cross reference to DMF [Redacted] was removed from NDA 21-746. Discovery believes that complete information supporting the CMC for Surfaxin including clarification requested by the Agency is now included in the NDA 21-746". No IQA was posted for the resubmission.

filename: C:\my documents\review\NDA\N021746R3
Executive Summary

I. Recommendations

A. Recommendation on Approvability – The application is approvable upon resolution of the issues cited in review section H of this document.

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable - NA

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The drug product is

B. Brief Description of Microbiology Deficiencies – See section H.

C. Assessment of Risk Due to Microbiology Deficiencies – See section H.

III. Administrative

A. Reviewer’s Signature

Vinayak B. Pawar, Ph.D.

B. Endorsement Block

David Hussong, Ph.D.

C. CC Block

NA

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The NDA 21-746 is approvable pending resolution of the issues cited in section H of this review.

David Hussong
4/30/2008 02:44:16 PM
MICROBIOLOGIST
I concur with the reviewer’s recommendation of Approvable, and the deficiency questions to be provided to the applicant.
Product Quality Microbiology Review
Review for HFD-570

6 March 2006

NDA: 21-746 N000 AZ

Drug Product Name
Proprietary: Surfaxin®
Non-proprietary: lucinactant
Drug Product Classification: 1S

Review Number: 2

Subject of this Review
Submission Date: October 5, 2005
Receipt Date: October 31, 2005
Consult Date: October 31, 2005
Date Assigned for Review: November 2, 2005

Submission History (for amendments only)
Date(s) of Previous Submission(s): NA
Date(s) of Previous Micro Review(s): NA

Applicant/Sponsor
Name: Discovery Laboratories, Inc.
Address: Warrington, PA
Representative: Christopher J. Schaber, Ph.D.
Telephone: 215-488-9494

Name of Reviewer: Vinayak B. Pawar

Conclusion: The application is approvable from microbiology standpoint pending resolution of issues cited here and in DMF review document.
Product Quality Microbiology Data Sheet

A. 1. TYPE OF SUPPLEMENT: NA

2. APPLICATION PROVIDES FOR: Amended New Drug Application

3. MANUFACTURING SITE: Totowa, NJ

4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY: 30mg/mL, intratracheal

5. METHOD (S) OF STERILIZATION: (b)(4)

6. PHARMACOLOGICAL CATEGORY: Treatment of Respiratory Distress Syndrome

B. SUPPORTING/RELATED DOCUMENTS: DMF (b)(4)

C. REMARKS: The consult requests review of amended NDA 21-746 [N000 AZ] for the drug product Surfaxin®. Nine volumes of the amended application were submitted for review. Discovery Laboratories has purchased Laureate Pharma Inc., the manufacturing site for the drug product. An official letter dated January 2006 from Laureate Pharma Inc. (The DMF (b)(4) holder) acknowledges the transfer of ownership of this facility. Therefore, for issues pertinent to this review, cross reference may be made between DMF (b)(4) and NDA 21-746 findings.

filename: C:\my documents\review\NDA\N021746R2
Executive Summary

I. Recommendations

A. Recommendation on Approvability – The application is approvable upon resolution of the issues cited in review section H of this document and in review section H of DMF (0)(6).

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable - NA

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The drug product is

B. Brief Description of Microbiology Deficiencies – See section H.

C. Assessment of Risk Due to Microbiology Deficiencies – See section H.

III. Administrative

A. Reviewer’s Signature

Vinayak B. Pawar, Ph.D.

B. Endorsement Block

James McVey

C. CC Block

NA

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/s/

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Vinayak Pawar
MICROBIOLOGIST

Approvable pending resolution of deficiencies cited in section H of this review.

James McVey
3/7/2006 01:10:56 PM
MICROBIOLOGIST
Product Quality Microbiology Review

Review for HFD-570

18 January 2005

NDA: 21-746

Drug Product Name

Proprietary: Surfacin®
Non-proprietary: lucinactant
Drug Product Classification: 1S

Review Number: 1

Subject of this Review
Submission Date: April 13, 2004
Receipt Date: 
Consult Date: July 16, 2004
Date Assigned for Review: August 3, 2004

Submission History (for amendments only)
Date(s) of Previous Submission(s): NA
Date(s) of Previous Micro Review(s): NA

Applicant/Sponsor
Name: Discovery Laboratory, Inc.
Address: Warrington, PA
Representative: Christopher J. Schaber, Ph.D.
Telephone: 215-488-9494

Name of Reviewer: Vinayak B. Pawar

Conclusion: The application is approvable from microbiology standpoint pending resolution of issues cited in DMF review document.
Product Quality Microbiology Data Sheet

A. 1. TYPE OF SUPPLEMENT: NA
    2. SUPPLEMENT PROVIDES FOR: NA
    3. MANUFACTURING SITE: Totowa, NJ
    4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY: 30mg/mL, intratracheal
    5. METHOD (S) OF STERILIZATION: (b) (4)
    6. PHARMACOLOGICAL CATEGORY: Treatment of Respiratory Distress Syndrome

B. SUPPORTING/RELATED DOCUMENTS: DMF (b) (4)

C. REMARKS: The consult requests review of NDA 21-746 for the drug product Surfaxin®. Two volumes designated as Module 1 and Module 3 were submitted for review. Originally DMF (b) (4) was referenced as the document supporting the NDA. This DMF did not contain the validation data including the (b) (4) When the sponsor was contacted DMF (b) (4) was instead updated and submitted for review of the above processes.

filename: C:\my documents\review\NDA\N021746R1
Executive Summary

I. Recommendations

A. **Recommendation on Approvability** – The application is approvable upon resolution of the issues cited in the DMF review document.

B. **Recommendations on Phase 4 Commitments and/or Agreements, if Approvable** – NA

II. Summary of Microbiology Assessments

A. **Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology** – The drug product is

B. **Brief Description of Microbiology Deficiencies** – See section H.

C. **Assessment of Risk Due to Microbiology Deficiencies** – See section H.

III. Administrative

A. **Reviewer's Signature**

B. **Endorsement Block**
   Vinayak B. Pawar, Ph.D.
   David Hussong, Ph.D., Microbiology Supervisor

C. **CC Block**
   cc:
   Original NDA 21-746
   HFD- 570/Division File/Christine Yu

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Deficiencies were found in the NDA and the referenced DMF