CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

205572Orig1s000

MICROBIOLOGY / VIROLOGY REVIEW(S)

Division of Anti-Infective Products
Clinical Microbiology Review

NDA: 205572

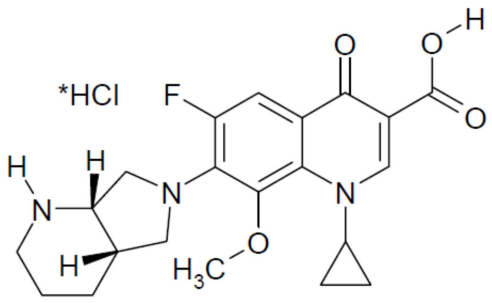
Date Company Submitted: 10-02-2014
Date received by CDER: 10-02-2014
Date Assigned: 11-10-2014
Date Completed: 01-28-2015
Reviewer: Kalavati Suvarna, Ph.D.

NAME AND ADDRESS OF APPLICANT:

Fresenius Kabi USA, LLC
Three Corporate Drive
Lake Zurich, IL 60047
Contact: Ms. Nicole Cage, Site Regulatory Manager
Tel: 847-550-2685
Fax: 847-550-7120

DRUG PRODUCT NAMES:
Proprietary Name: To be determined
Established Name: Moxifloxacin Injection
Chemical Name: 1-cyclopropyi-7-[(S,S)2,8-diazabicyclo[4.3.0]non-8-y 1]-6-fluoro-8-methoxy-1 ,4-dihydro-4-oxo-3 quinoline carboxylic acid

Structural formula:



Molecular formula: $C_{21}H_{24}FN_3O_4 \bullet HCl$
Molecular weight: 437.9

DRUG CATEGORY: Antibacterial

PROPOSED DOSAGE FORM AND STRENGTH: Sterile Injectable Solution for Intravenous Infusion, 400 mg/250 mL

ROUTE OF ADMINISTRATION AND DURATION OF TREATMENT:
Intravenous

DISPENSED: R_X

INDICATION:
Treatment of infections in adults ≥ 18 years of age caused by designated, susceptible bacteria.
• Acute Bacterial Sinusitis
• Acute Bacterial Exacerbation of Chronic Bronchitis
• Community Acquired Pneumonia
• Skin and Skin Structure Infections: Uncomplicated and Complicated
• Complicated Intra-Abdominal Infections

TYPE OF SUBMISSION:
New Drug Application

PURPOSE OF SUBMISSION:
An original 505(b)(2) application for Moxifloxacin Injection

RELATED DOCUMENTS:
NDA 021227 AVELOX®

SUMMARY AND RECOMMENDATION:

NDA 205572 is an original 505(b)(2) application for Moxifloxacin Injection from Fresenius Kabi USA, LLC. The original NDA was submitted June 6, 2013 and received a Complete Response Letter on April 4, 2014. No clinical microbiology deficiencies were noted in this letter. The original NDA resubmission containing responses to the Complete Response Letter was submitted October 2, 2014 (eCTD sequence 0005) and is the subject of this review. Moxifloxacin Hydrochloride Injection is marketed in the US as Avelox® (NDA 21-277, Bayer Corporation). It is approved for the treatment of infections (Acute Bacterial Sinusitis, Acute Bacterial Exacerbation of Chronic Bronchitis, Community Acquired Pneumonia, Skin and Skin Structure Infections: Uncomplicated and Complicated, Complicated Intra-Abdominal Infections) in adults ≥ 18 years of age caused by designated, susceptible bacteria. The applicant intends to rely on the Agency's findings of safety and efficacy for the reference listed drug (LD), Avelox®, to support the approval of this application. No additional clinical microbiology information was included in the resubmission. No recommendation is made regarding approval of the application and no labeling changes are proposed at this time.

SIGNATURES:

Kalavati Suvarna, Ph.D. {See appended signature}
Clinical Microbiology Reviewer Signature/Date

Kerry Snow, M.S. . {See appended signature}
Clinical Microbiology Team Leader Signature/Date

CC:
Original NDA
MO/Yasinskaya Yuliya
MO TL/Alexander, John
CSO/Izadi, Fariba

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/s/

KALAVATI C SUVARNA
01/28/2015

KERRY SNOW
01/28/2015

Product Quality Microbiology Review

31 JAN 2014

NDA: 205572

Drug Product Name
Proprietary: N/A
Non-proprietary: Moxifloxacin Injection

Review Number: 1

Dates of Submission(s) Covered by this Review

Submit	Received	Review Request	Assigned to Reviewer
06 JUNE 2013	07 JUNE 2013	12 JUNE 2013	14 JUNE 2013

Applicant/Sponsor
Name: Fresenius Kabi USA, LLC
Address: Three Corporate Drive
Lake Zurich, IL 60047

Representative: Nicole Cage, Senior Regulatory Specialist
Three Corporate Drive
Lake Zurich, IL 60047

Telephone: (847) 550-2685
Name of Reviewer: Neal J. Sweeney, Ph.D.

Conclusion: Recommended for Approval

Product Quality Microbiology Data Sheet

A. 1. TYPE OF SUBMISSION: 505 (b) (2) Original NDA

2. SUBMISSION PROVIDES FOR: New drug product

3. MANUFACTURING SITE:

Fresenius Kabi Norge AS
Svinesundsveien 80
NO-1789 Berg i Østfold
Norway

4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY: single-use/dose LVP, 400 mg/250 mL for intravenous infusion over one hour

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

6. PHARMACOLOGICAL CATEGORY: Antibiotic indicated for treatment of adult patients with infections caused by designated, susceptible bacteria.

B. SUPPORTING/RELATED DOCUMENTS:
Type III DMF 026696 (**free***flex*® bag)

C. REMARKS: The tonicity of the proposed Fresenius Kabi moxifloxacin drug product differs from the RLD (Avelox®) in that whereas the proposed Fresenius Kabi moxifloxacin drug product contains (b) (4) mg/mL Sodium Acetate Trihydrate and (b) (4) mg/mL Disodium Sulfate (sodium sulfate, (b) (4)), the RLD (Avelox®) contains (b) (4) mg/mL Sodium Chloride.

The proposed Fresenius Kabi moxifloxacin drug product was initially developed as a dual port (administration and additive ports) LVP bag. However, the proposed drug product will only contain a single administration port.

Filename: N205572R1.doc

Executive Summary

I. Recommendations

A. Recommendation on Approvability - Recommended for Approval.

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable – N/A

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The drug product manufacturing process includes (b) (4)

B. Brief Description of Microbiology Deficiencies – Based upon the information provided, no microbiology deficiencies were identified.

C. Assessment of Risk Due to Microbiology Deficiencies – Not applicable

D. Contains Potential Precedent Decision(s)- ☐ **Yes** ☒ **No**
(If yes, provide a brief description and a reference to the page where the precedent is discussed in depth)

III. Administrative

A. Reviewer's Signature _____
Neal J. Sweeney, Ph.D.

B. Endorsement Block _____
Bryan S. Riley, Acting Team Leader

C. CC Block
N/A

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/s/

NEAL J SWEENEY
02/10/2014

BRYAN S RILEY
02/10/2014
I concur.

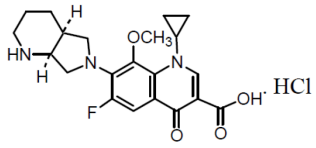
Division of Anti-Infective Products
Clinical Microbiology Review

NDA 205572:
Date Company Submitted: 6 June 2013
Date received by CDER: 6 June 2013
Date Assigned: 6 June 2013
Date Completed: 5 February 2014
Reviewer: Kerry Snow, MS

NAME AND ADDRESS OF APPLICANT:
Fresnius Kabi USA, LLC
Three Corporate Drive
Lake Zurich, IL 60047
847-550-2300

CONTACT PERSON:
Nicole Cage, Senior Regulatory Specialist
847-550-2685

DRUG PRODUCT NAMES:
Proprietary Name: N/A
Code Name: N/A
Established Name: moxifloxacin
Molecular Weight: 437.9
Molecular Formula: $C_{21}H_{24}FN_3O_4 \cdot HCl$
Chemical Name: l-cyclopropyi-7-[(S,S)2,8-diazabicyclo[4.3.0] non-8-yl]-6-fluoro-8-methoxy-1 ,4-dihydro-4-oxo-3 quinoline carboxylic acid



PROPOSED DOSAGE FORM AND STRENGTH:
Intravenous infusion, 400 mg/250 mL

ROUTE OF ADMINISTRATION AND DURATION OF TREATMENT:
Intravenous

DISPENSED:
Rx

INDICATIONS:
Treatment of infections in adults ≥ 18 years of age caused by designated, susceptible bacteria.
- Acute Bacterial Sinusitis
- Acute Bacterial Exacerbation of Chronic Bronchitis
- Community Acquired Pneumonia
- Skin and Skin Structure Infections: Uncomplicated and Complicated
- Complicated Intra-Abdominal Infections

RELATED DOCUMENTS:
NDA 021277 AVELOX®

TYPE OF SUBMISSION:
New Drug Application

SUMMARY:

The Applicant has submitted an NDA in accordance with Section 505(b)(2) of the Federal Food, Drug and Cosmetic Act (21 U.S.C.. 355), and a request for a waiver of in vivo bioequivalence studies. The submission includes no information relevant for review by the clinical microbiology reviewer. No recommendation is made regarding approval of the Application, and no labeling changes are proposed at this time.

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/s/

KERRY SNOW
02/05/2014