APPLICATION NUMBER:

21-852

MICROBIOLOGY REVIEW(S)
Product Quality Microbiology Review
Review for HFD-540

29 JUL 2005

NDA: 21-852
      21-852 BI

Drug Product Name
  Proprietary: Dovobet® Ointment
  Non-proprietary: Calcipotriene hydrate and betamethasone dipropionate ointment

Drug Product Priority Classification: 4S

Review Number: 1

Dates of Submission(s) Covered by this Review

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<td>09-MAR-2005</td>
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Submission History (for amendments only) – N/A

Applicant/Sponsor
  Name: LEO Pharmaceutical Products Ltd.
  Address: Industrieparken 55
           DK-2750 Ballerup
           Denmark

  Representative: Gail Glifort, RAC
                  Consultant, PAREXEL Consulting
  Telephone: (919) 294-5099
  E-mail: gail.glifort@parexel.com

Name of Reviewer: Anastasia G. Lolas

Conclusion: Recommended for approval based on microbiological product quality
Product Quality Microbiology Data Sheet

A. 1. TYPE OF SUBMISSION: New drug application

2. SUBMISSION PROVIDES FOR: Product quality microbiology for a non-aqueous based ointment for topical skin application

3. MANUFACTURING SITE:
   Manufacturing and testing site: LEO Laboratories Ltd. (LEO Pharma)
   285 Cashel Road, Dublin 12
   Ireland
   Stability testing: LEO Laboratories Ltd. (LEO Pharma)
   Industriparken 55
   DK-2750 Ballerup
   Denmark

4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:
   - Ointment
   - Topical dermatologic
   - 0.005% calcipotriene and —- betamethasone
   - 3, 15, 30, 60 an' — aluminum tubes

5. METHOD(S) OF STERILIZATION: N/A, drug product is non-sterile

6. PHARMACOLOGICAL CATEGORY: Treatment of psoriasis vulgaris

B. SUPPORTING/RELATED DOCUMENTS: N/A

C. REMARKS: Ms. Gail Glifort was contacted via e-mail on June 29, 2005 to provide information on: in-house protocols and procedures for testing for microbial limits; validation of the test methods; raw data on materials/excipients and finished product with action limits; sampling plan. An electronic response was received on July 13 and a minor amendment was submitted on the same day.

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Executive Summary

I. Recommendations

A. Recommendation on Approvability – Recommended for approval based on microbiological product quality

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 submission includes microbial test methods, specifications and action limits for the drug product and its excipients.

B. Brief Description of Microbiology Deficiencies – N/A

C. Assessment of Risk Due to Microbiology Deficiencies – N/A

III. Administrative

A. Reviewer's Signature

   Anastasia G. Lolas

B. Endorsement Block

   David Hussong, Ph.D.
   Microbiology Supervisor

C. CC Block

   In DFS
5 Page(s) Withheld

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Draft Labeling

Deliberative Process