CENTER FOR DRUG EVALUATION AND RESEARCH

Approval Package for:

APPLICATION NUMBER:

20-560/S029

Trade Name: Fosamax

Generic Name: (alendronate sodium)

Sponsor: Merck Research Laboratories

Approval Date: June 26, 2001
**REFERENCES**

**APPLICATION NUMBER:**

20-560/ S029

**CONTENTS**

**Reviews / Information Included in this NDA Review.**

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<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Approval Letter</td>
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<td>Medical Review(s)</td>
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<td>Chemistry Review(s)</td>
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<td>Pharmacology Review(s)</td>
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<td>Clinical Pharmacology/ Biopharmaceutics Review(s)</td>
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<tr>
<td>Administrative/Correspondence Document(s)</td>
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CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:
20-560/ S029

APPROVAL LETTER
NDA 20-560/S-029

Merck & Co., Inc.
Attention: Michele Flicker, M.D., Ph.D.
Director, Regulatory Affairs
P.O. Box 2000
Mail Drop: Ry 33-720
Rahway, NJ 07065

Dear Dr. Flicker:

Please refer to your supplemental new drug application dated March 12, 2001, received March 13, 2001, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for Fosamax (alendronate sodium) Tablets.

This "Changes Being Effected in 30 days" supplemental new drug application provides for the addition of the Merck Arecibo facility in Puerto Rico (CFN# 2650235), as an packaging site for blister packages of Fosamax Tablets.

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, call Randy Hedin, R.Ph., Senior Regulatory Management Officer at (301) 827-6392.

Sincerely,

(See appended electronic signature page)

Duu-Gong Wu, Ph.D.
Chemistry Team Leader II, DNDC II for the Division of Metabolic and Endocrine Drug Products, (HFD-510)
DNDC II, Office of New Drug Chemistry Center for Drug Evaluation and Research
This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/

Duu-gong Wu
6/26/01 12:40:34 PM
APPLICATION NUMBER:
20-560/ S029

CHEMISTRY REVIEW(S)
<table>
<thead>
<tr>
<th>CHEMIST'S REVIEW</th>
<th>1. ORGANIZATION</th>
<th>2. NDA NUMBER</th>
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<tbody>
<tr>
<td></td>
<td>DMEDP, HFD-510</td>
<td>20-560</td>
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<table>
<thead>
<tr>
<th>3. NAME AND ADDRESS OF APPLICANT</th>
<th>4. SUPPLEMENT NUMBER, DATE</th>
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<tbody>
<tr>
<td>Merck &amp; Co., Inc.</td>
<td>SCS-029, 3/12/01 (CBE)</td>
</tr>
<tr>
<td>Sumneytown Pike P.O. Box 4</td>
<td>User Fee date:</td>
</tr>
<tr>
<td>BLA-20 West Point, PA 19486</td>
<td>9/13/01 (6 months)</td>
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<tr>
<th>5. NAME OF THE DRUG</th>
<th>6. NONPROPRIETARY NAME</th>
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<tr>
<td>Fosamax™ tablets</td>
<td>Alendronate sodium</td>
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<tr>
<th>7. SUPPLEMENT PROVIDES FOR:</th>
<th>8. AMENDMENTS/REPORT, DATE</th>
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<tr>
<th>9. PHARMACOLOGICAL CATEGORY</th>
<th>10. HOW DISPENSED</th>
<th>11. RELATED IND/ND/NDA/DMF</th>
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<tbody>
<tr>
<td>Treatment and prevention of Rx osteoporosis. Treatment of Paget's disease of bone.</td>
<td></td>
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<tr>
<th>12. DOSAGE FORM</th>
<th>13. POTENCY</th>
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</thead>
<tbody>
<tr>
<td>Tablet</td>
<td>5;10;35;40;70 mg</td>
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<table>
<thead>
<tr>
<th>14. CHEMICAL NAME AND STRUCTURE.</th>
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</thead>
<tbody>
<tr>
<td>(4-amino-1-hydroxybutyridene) bisphosphonic acid monosodium salt trihydrate, C₉H₉N₂NaO₇P₂·3H₂O</td>
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<table>
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<tr>
<th>15. COMMENTS</th>
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<tr>
<td>The supplement provides for the addition of the Merck Arecibo facility (CFN# 2650235) as an packaging site for packaging blister packages for Fosamax tablets. Normally, this kind of change is considered to be a minor change and can be reported in an annual report (see Changes to an Approved NDA or ANDA Guidance VI. D. 1.). However, this site was inspected for NDA 20-560/S 021 and was put on a withhold recommendation on December 11, 2000 by the district office. Therefore, this supplement was submitted (to HFD-510) and filed as a CBE-30. The withhold recommendation was due to some manufacturing / testing laboratory computer problems. On December 27, 2000, the office of compliance did not concur with the withhold recommendation, since the firm’s corrective actions taken or promised appeared adequate. Subsequently, on April 18, 2001, the Merck facility (CFN# 2650235) was found acceptable.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>16. CONCLUSION AND RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>From a chemistry standpoint, adequate information has been provided. Issue an approval letter.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17. NAME</th>
<th>REVIEWER SIGNATURE</th>
<th>DATE COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elsbeth G. Chikhale, Ph.D.</td>
<td></td>
<td>5/3/01</td>
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<table>
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<tr>
<th>DISTRIBUTION:</th>
<th>ORIGINAL JACKET</th>
<th>CSO</th>
<th>REVIEWER</th>
<th>DIVISION FILE</th>
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<tbody>
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Init. by: CC: HFD-510, NDA 20-560/S-029
HFD-510/ DG Wu / R Hedin / EG Chikhale / Division file / NDA 20-560
This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/
---------------------
Elsbeth Chikhale
5/9/01 09:07:39 AM
CHEMIST

Duu-gong Wu
5/9/01 04:12:47 PM
CHEMIST
APPLICATION NUMBER:
20-560/ S029

ADMINISTRATIVE and CORRESPONDENCE DOCUMENTS
March 12, 2001

Central Document Room
Food and Drug Administration
Center for Drug Evaluation and Research
12229 Wilkins Avenue
Rockville, MD 20852

NDA 20-560: FOSAMAX® (Alendronate Sodium)

SPECIAL SUPPLEMENT - CHANGES BEING EFFECTED in 30 DAYS

Reference is made to the New Drug Application (NDA) cited above for FOSAMAX®.

Pursuant to Section 505(b) of the Food, Drug and Cosmetic Act and in accordance with 506A(d)(3)(B)(i) of the Food and Drug Administration Modernization Act, we submit, for the Agency's review and approval, a supplement to NDA 20-560. As indicated on the attached Form FDA 356h, this supplemental application provides for changes in the Chemistry Section of the approved New Drug Application for FOSAMAX®. The Chemistry section has been revised to reflect the addition of Merck, Arecibo, Puerto Rico as an - packaging site for blister packages for FOSAMAX® tablets.

All information is in an electronic format as indicated in the Table of Contents for this supplemental application. The Statement of Organization following this letter describes the sections contained in this application.

This supplemental application is formatted as required in Title 21 paragraph 314.50 of the Code of Federal Regulations and is being submitted in accordance with the January 1999, Guidance for Industry – Providing Regulatory Submissions in Electronic Format – NDAs. As an attachment to this letter, Merck Research Laboratories (MRL), a division of Merck & Co., Inc., is providing one Compact Disk (CD) which contains the supplemental application. All documents requiring signatures for certification are included as paper for archival purposes.

All of the information is contained on one CD and is not more than 100MB. We have taken precautions to ensure that the contents of this CD are free of computer viruses (Norton Anti-Virus 4.0, Symantec Corp., 1991-1997) and we authorize the use of anti-virus software, as appropriate.

A list of reviewers from the Division of Metabolic and Endocrine Drug Products who should be provided access to this electronic submission on their desktops may be obtained from Mr. Randy Hedin, Regulatory Project Manager, Division Metabolic and Endocrine Drug Products.

In accordance with the Prescription Drug User Fee Act of 1992 (PDUFA) and reauthorized in the Food and Drug Administration Modernization Act of 1997 (FDAMA), as indicated in the attached Form 3397, no user fee is required for this supplemental application.
Pursuant to 21 CFR 314.50, a complete field copy of this supplement has been submitted to the FDA Philadelphia District Office.

Merck & Co., Inc. is requesting a categorical exclusion for the requirements to prepare an Environmental Assessment under 21 CFR 25.31(a). This supplement meets the requirements of a categorical exclusion under 21 CFR 25.31(a) because it will not increase the use of the drug. To the best of the firm’s knowledge no extraordinary circumstances exist in regard to this action.

As required by Section 306(k)(1) of the Generic Drug Enforcement Act [21 U.S.C. 335a (k)(1)], we hereby certify that, in connection with this application, Merck & Co., Inc. did not and will not use in any capacity the services of any person debarred under subsections 306 (a) or (b) of the Act.

We consider the filing of this Supplemental New Drug Application to be a confidential matter, and request that the Food and Drug Administration not make its content, nor any future communications in regard to it, public without first obtaining the written permission of Merck & Co., Inc.

Questions concerning this supplemental application should be directed to Michele R. Flicker, MD, PhD, FACP (732-594-1502) or, in my absence, Steven Caffé, MD (732-594-2182).

Sincerely,

Michele R. Flicker, MD, PhD, FACP
Director, Regulatory Affairs

Enclosure: CD

Federal Express #1

Desk Copy: Mr. Randy Hedin, Regulatory Project Manager (cover letter)
HFD-510, Room 14B-04
Federal Express #2

Desk Copy /Att: Ms. Debra L. Pagano
Philadelphia District Office
Food and Drug Administration
U.S. Custom House Room 900
2nd & Chestnut Streets
Philadelphia, PA 19106-2973
Federal Express #3
NDA 20-560/S-029

CBE-30 SUPPLEMENT

Merck & Co., Inc.
Attention: Michele R. Flicker, M.D., Ph.D.
Director, Regulatory Affairs
P.O. Box 2000
Mail Drop: Ry 33-720
Rahway, NJ 07065

Dear Dr. Flicker:

We have received your supplemental drug application submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for the following:

Name of Drug Product:  Fosamax (alendronate sodium) Tablets

NDA Number:  20-560

Supplement Number:  S-029

Date of Supplement:  March 12, 2001

Date of Receipt:  March 13, 2001

This supplemental application, submitted as a "Supplement - Changes Being Effected in 30 days" supplement, proposes to add Merck, Arecibo, Puerto Rico as an site change for packaging blister packages.

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 May 12, 2001, in accordance with 21 CFR 314.101(a). If the application is filed, the user fee goal date will be September 13, 2001.

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 Service/Courier/Overnight Mail:

Food and Drug Administration  
Center for Drug Evaluation and Research  
Division of Metabolic and Endocrine Drug Products, HFD-510  
Attention: Division Document Room, 14B-19  
5600 Fishers Lane  
Rockville, Maryland  20857

If you have any questions, call me at (301) 827-6392.

Sincerely,

{See appended electronic signature page}

Randy Hedin, R.Ph.  
Senior Regulatory Project Manager  
Division of Metabolic and Endocrine Drug Products  
Office of Drug Evaluation II  
Center for Drug Evaluation and Research
1. APPLICANT'S NAME AND ADDRESS

Merck & Co., Inc.
Sumneytown Pike, BLA-10
P. O. Box 4
West Point, PA 19486

2. TELEPHONE NUMBER (Include Area Code)

(610) 397-2383

3. PRODUCT NAME

Fosamax®

4. DOES THIS APPLICATION REQUIRE CLINICAL DATA FOR APPROVAL?
   IF YOUR RESPONSE IS "NO" AND THIS IS FOR A SUPPLEMENT, STOP HERE
   AND SIGN THIS FORM.

   IF RESPONSE IS "YES", CHECK THE APPROPRIATE RESPONSE BELOW:

   ☐ THE REQUIRED CLINICAL DATA ARE CONTAINED IN THE APPLICATION.
   ☐ THE REQUIRED CLINICAL DATA ARE SUBMITTED BY
     REFERENCE TO
     (APPLICATION NO. CONTAINING THE DATA).

5. USER FEE I.D. NUMBER

6. LICENSE NUMBER / NDA NUMBER

No 20560

7. IS THIS APPLICATION COVERED BY ANY OF THE FOLLOWING USER FEE EXCLUSIONS? IF SO, CHECK THE APPLICABLE EXCLUSION.

☐ A LARGE VOLUME PARENTERAL DRUG PRODUCT
   APPROVED UNDER SECTION 505 OF THE FEDERAL
   FOOD, DRUG, AND COSMETIC ACT BEFORE 9/1/92
   (Self Explanatory)

☐ A 505(b)(2) APPLICATION THAT DOES NOT REQUIRE A FEE
   (See item 7, reverse side before checking box.)

☐ THE APPLICATION QUALIFIES FOR THE ORPHAN
   EXCEPTION UNDER SECTION 732(a)(1)(E) of the Federal Food,
   Drug, and Cosmetic Act
   (See item 7, reverse side before checking box.)

☐ THE APPLICATION IS SUBMITTED BY A STATE OR FEDERAL
   GOVERNMENT ENTITY FOR A DRUG THAT IS NOT DISTRIBUTED
   COMMERCIALY
   (Self Explanatory)

☐ WHOLE BLOOD OR BLOOD COMPONENT FOR
   TRANSFUSION

☐ A CRUDE ALLERGENIC EXTRACT PRODUCT

☐ AN APPLICATION FOR A BIOLOGICAL PRODUCT
   FOR FURTHER MANUFACTURING USE ONLY

☐ AN "IN VITRO" DIAGNOSTIC BIOLOGICAL PRODUCT
   LICENSED UNDER SECTION 351 OF THE PHS ACT

☐ BOVINE BLOOD PRODUCT FOR TOPICAL
   APPLICATION LICENSED BEFORE 9/1/92

8. HAS A WAIVER OF AN APPLICATION FEE BEEN GRANTED FOR THIS APPLICATION?

☐ YES ☐ NO

(See reverse side if answered YES)

A completed form must be signed and accompany each new drug or biologic product application and each new
supplement. If payment is sent by U.S. mail or courier, please include a copy of this completed form with payment.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing
instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.
Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to:

DHH, Reports Clearance Officer
Paperwork Reduction Project (0910-0297)
Hubert H. Humphrey Building, Room 531-H
200 Independence Avenue, S.W.
Washington, DC 20201

An agency may not conduct or sponsor, and a person is not
required to respond to, a collection of information unless it
displays a currently valid OMB control number.

Please DO NOT RETURN this form to this address.

SIGNATURE OF AUTHORIZED COMPANY REPRESENTATIVE

Bonnie J. Goldmann, M.D.
Vice President, Domestic Liaison
Regulatory Affairs

DATE

March 12, 2001