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APPLICATION NUMBER:
21-478

MICROBIOLOGY REVIEW

**MICROBIOLOGY REVIEW
DIVISION OF ANTIVIRAL DRUG PRODUCTS (HFD-530)**

NDA 21-478 SN 000

REVIEW DATE: 11/18/2002

Reviewer: N. Biswal

Date Submitted: 3/29/2002

Date Received: 5/03/2002

Date Assigned: 5/15/2002

**Sponsor: GlaxoSmithKline Inc.
PO Box 13398
Five Moore Drive
Research Triangle Park, NC 27709**

Product Names:

**Code Name: Zovirax®
Acyclovir (5%) Cream**

Chemical Name: 2-amino-1,9-dihydro-9-[(2-hydroxy)methyl]6-H-purin-6-one

Structural Formula:

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~~_____~~

Empirical Formula: C₈H₁₁N₅O₃

Molecular Weight: 225.21

Drug Category: Antiviral

Indication: Treatment of recurrent herpes labialis

Dosage Form/Route of Administration: Cream (5%)/ Topical

Supporting Documents: NA

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BACKGROUND AND SUMMARY: Acyclovir (ACV) is a synthetic guanosine analogue with inhibitory activity against a number of human herpesviruses *in vitro*. Its antiviral activity is due to its selective phosphorylation in virus infected cells to a triphosphate form which inhibits viral DNA replication. Sensitivity test results, expressed as the concentrations of ACV required to inhibit by 50 % the replication of herpesviruses in cell culture (IC₅₀) have ranged from 0.02-13.5 µg/ml against HSV-1, and 0.01-9.9 µg/ml against HSV-2, depending upon the virus strain, cell type and method(s) of virus assay used.

In this New Drug Application the sponsor is seeking marketing approval of a new topical formulation of ACV, ZOVIRAX 5% cream, as a prescription drug product for the treatment of recurrent herpes labialis in patients of 12 years of age and older. In the proposed dosing regimen, ZOVIRAX 5% cream is to be applied 5 times per day for four days.

Since various formulations of ACV have been previously approved by the FDA as prescription drug products against HSV infections, the sponsor has not included any new information on the microbiology (virology) of ACV in this NDA. The Virology Section of ZOVIRAX 5% cream draft package insert has adequately described the information related to the microbiology of ACV.

RECOMMENDATION: The NDA for Zovirax 5% cream intended for the treatment of recurrent herpes labialis is approved with respect to microbiology.

Nilambar Biswal, Ph.D.
Microbiologist

CONCURRENCES:

HFD-530/Assoc Dir/J. Farrelly Date

HFD-530/TImicro/J. O'Rear Date

CC:

HFD-530/Original NDA 21-478

HFD-530/Division File

HFD-530/Belouin, RPM

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/s/

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