CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

50-807

SUMMARY REVIEW

Acting Deputy Division Director Summary Review of NDA 50-807
Drug: Epirubicin Hydrochloride for Injection
Applicant: Mayne Pharma, Inc.
Date: July 26, 2006

This is a 505(b)(2) application for Epirubicin Hydrochloride for Injection. This application is for the approved indication of the reference drug, ELLENCE Injection (epirubicin hydrochloride-aqueous solution), as a component of adjuvant therapy in patients with evidence of axillary node tumor involvement following resection of primary breast cancer. Mayne Pharmaceutical proposes that Epirubicin Hydrochloride for Injection be packaged as 50 mg and 200 mg lyophilized powder formulations.

The NDA was originally submitted on July 15, 2005. The review time clock was extended due to submission of a Chemistry, Manufacturing and Controls major amendment on April 28, 2006. The revised PDUFA goal date is August 19, 2006.

Medical Review
The Medical Officer's Review by Drs. Cortazar and Johnson recommended approval.

Clinical Pharmacology Review
A Clinical Pharmacology and Biopharmaceutics Review was completed by Angela Men, Ph.D., and Brian Booth, Ph.D. on March 20, 2006. The change in formulation was found acceptable to the Office of Clinical Pharmacology and Biopharmaceutics.

Chemistry Manufacturing and Control (CMC) Review
The Chemistry Review by Xiao-Hong Chen, Ph.D. and Ravi Harapanhalli, Ph.D. was completed on July 25, 2006.

The review stated that "From a CMC perspective, this application is recommended for approval. The applicant has satisfactorily addressed all CMC deficiencies. The DMF [redacted] as amended on June 8, 2006, has been reviewed and found to be adequate. The Office of Compliance has provided an overall "acceptable" recommendation for this application. We recommend that the following comment regarding shelf life be included in the approval letter:
An expiration-dating period of 18 months for the drug product is granted based on stability data provided."

Microbiology Review

The Microbiology Review by John Metcalfe, Ph.D. and Bryan Riley, Ph.D. was completed on June 26, 2006. The submission was found to be acceptable and adequate for approval.

Pharmacology/Toxicology Review
The Microbiology Review by Haleh Saber-Mahloogi, Ph.D. and David Morse, Ph.D. was completed on April 19, 2006. The submission was found to be acceptable and adequate for approval.

Division of Medication Errors and Technical Support (DMETS) Consultation
The DMETS consultation dated July 15, 2005 made recommendations to decrease the potential for medication errors. They recommended

1) Use of contrasting colors or boxing to better distinguish better distinguish the 50 mg and 200mg strengths
2) Revise text to read "Single-Dose Vial. Discard Unused Portion."
3) Include a usual dosage statement as stated in 21 CFR 201.55
4) Revise the container label and carton labeling to include a comment about reconstitution and increase the prominence of the route of administration

During the review cycle, the sponsor submitted new labeling in response to a suggestion from Office of Generic Drugs (OGD) that Tall man font could be used to distinguish this product from doxorubicin and other cytotoxic agents ending in "rubicin". DMETS did not agree and wanted use of the Tall man font reserved for special situations. After further discussion, CMC, DMETS, and OGD all jointly agreed that for this application Tall man font should not be used. This information was communicated to the company who revised their labeling and removed Tall man font. All issues regarding labeling are resolved at this time.

Conclusion
I concur with the review teams that the application should be approved for the following indication "as a component of adjuvant therapy in patients with evidence of axillary node tumor involvement following resection of primary breast cancer."

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/s/

Ann Farrell
8/17/2006 09:11:45 AM
MEDICAL OFFICER