DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration
Silver Spring MD 20993

NDA 21799/S-016

SUPPLEMENT APPROVAL

AR Holding Company, Inc.
c/o Mutual Pharmaceutical Company, Inc.
Attention: Mr. Robert Dettery
Vice-President, Regulatory Affairs
1100 Orthodox Street
Philadelphia, PA 19124

Dear Mr. Dettery:

Please refer to your Supplemental New Drug Application (sNDA) dated and received, November 8, 2010 submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FDCA) for QUALAQUIN® (quinine sulfate USP) Capsules, 324 mg.

We acknowledge receipt of your amendment dated March 25, 2011.

This "Prior Approval" supplemental new drug application proposes the following revisions to the product labeling: (~~strikethrough~~ = deleted information and underline = added information)

1. The **HIGHLIGHTS OF PRESCRIBING INFORMATION/RECENT MAJOR CHANGES** subsection is revised as follows:

Drug Interactions	
~~Effects of Drugs on Quinine Pharmacokinetics (7.1)~~	~~11/2009~~
|Effects of Drugs and Other Substances on Quinine Pharmacokinetics (7.1)	4/2011
|Effects of Quinine on Pharmacokinetics of Other Drugs (7.2)	4/2011

2. The **HIGHLIGHTS OF PRESCRIBING INFORMATION/DRUG INTERACTIONS** subsection is revised as follows:

   The following text is added below the **DRUG INTERACTIONS** Table: See full prescribing information for a complete list of reported and potential interactions.

3. The following new subsection, **Effects of Drugs and Other Substances on Quinine Pharmacokinetics/Ritonavir,** has been added to **7.1 DRUG INTERACTIONS** as follows:

Ritonavir: In healthy subjects who received a single oral 600 mg dose of quinine sulfate with the 15th dose of ritonavir (200 mg every 12 hours for 9 days), there were 4-fold increases in the mean quinine AUC and C_{max}, and an increase in the mean elimination half-life (13.4 hours versus 11.2 hours), compared to when quinine was given alone. Therefore, the concomitant administration of ritonavir with QUALAQUIN capsules should be avoided [*see Drug Interactions (7.2)*].

4. The following new subsection, **Effects of Quinine on the Pharmacokinetics of Other Drug Products/Ritonavir,** has been added as to **7.2 DRUG INTERACTIONS** as follows:

   Ritonavir: In healthy subjects who received a single oral 600 mg dose of quinine sulfate with the 15th dose of ritonavir (200 mg every 12 hours for 9 days), the mean ritonavir AUC, C_{max}, and elimination half-life were slightly but not significantly increased compared to when ritonavir was given alone. However, due to the significant effect of ritonavir on quinine pharmacokinetics, the concomitant administration of QUALAQUIN capsules with ritonavir should be avoided [*see Drug Interactions (7.1)*].

We have completed our review of this supplemental application, as amended. It is approved, effective on the date of this letter, for use as recommended in the enclosed, agreed-upon labeling text.

CONTENT OF LABELING

As soon as possible, but no later than 14 days from the date of this letter, submit the content of labeling [21 CFR 314.50(l)] in structured product labeling (SPL) format using the FDA automated drug registration and listing system (eLIST), as described at http://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/default.htm. Content of labeling must be identical to the enclosed labeling (text for the package insert and Medication Guide), with the addition of any labeling changes in pending "Changes Being Effected" (CBE) supplements, as well as annual reportable changes not included in the enclosed labeling.

Information on submitting SPL files using eLIST may be found in the guidance for industry titled "SPL Standard for Content of Labeling Technical Qs and As" at http://www.fda.gov/downloads/DrugsGuidanceComplianceRegulaotryInformation/Guidances/UCM072392.pdf.

The SPL will be accessible from publicly available labeling repositories.

Also within 14 days, amend all pending supplemental applications for this NDA, including CBE supplements for which FDA has not yet issued an action letter, with the content of labeling [21 CFR 314.50(l)(1)(i)] in MS Word format, that includes the changes approved in this supplemental application, as well as annual reportable changes and annotate each change. To facilitate review of your submission, provide a highlighted or marked-up copy that shows all changes, as well as a clean Microsoft Word version. The marked-up copy should provide appropriate annotations, including supplement number(s) and annual report date(s).

REPORTING REQUIREMENTS

We remind you that you must comply with reporting requirements for an approved NDA (21 CFR 314.80 and 314.81).

If you have any questions, call Mr. Gregory DiBernardo, Regulatory Project Manager, at (301) 796-1600.

Sincerely,

{See appended electronic signature page}

Renata Albrecht, M.D.
Director
Division of Special Pathogen and Transplant Products
Office of Antimicrobial Products
Center for Drug Evaluation and Research

ENCLOSURE: Content of Labeling

This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/

RENATA ALBRECHT
04/14/2011