Food and Drug Administration
Center for Drug Evaluation and Research

**SUMMARY MINUTES** 0213 '99 JUN -3 P12:23
**ANTIVIRAL DRUGS ADVISORY COMMITTEE**
February 24, 1999
Holiday Inn, Gaithersburg, MD

Antiviral Drugs Advisory Committee
Scott Hammer, MD, Chair
Pamela Diaz, MD
Wafaa El-Sadr, MD
John Hamilton, MD
Henry Masur, MD
Brian Wong, MD
Ram Yogev, MD

FDA Participants
Debra Birnkrant, MD
Michael Elashoff, PhD
Paul Flyer, PhD
Heidi Jolson, MD, MPH
Robert Meyer, MD
Dianne Murphy, MD
Barbara Styrt, MD

SGE Consultants
Joseph Bertino, PharmD
Nancy Cox, PhD
Leslie Hendeles, PharmD
Edwin Kilbourne, MD
James Li, MD, PhD
Gregory Poland, MD
Sharilyn Stanley, MD
James K. Stoller, PhD
Joel Verter, PhD
Janet Wittes, PhD

These summary minutes for the February 24, 1999 Antiviral Drugs Advisory Committee meeting were approved on 5/4/99.

I certify that I attended the February 24, 1999 Antiviral Drugs Advisory Committee meeting and that these minutes accurately reflect what transpired.

Rhonda W. Stover, RPh
Executive Secretary

Scott Hammer, MD
Chair

The February 24, 1999 meeting of the Antiviral Drugs Advisory Committee consisted of a one-day open session.

## MEETING PROCEEDINGS-OPEN SESSION-February 24, 1999

TOPIC: Relenza® (zanamivir for inhalation), Glaxo Wellcome Incorporated, for the treatment of Influenza A and B.

Approximately 225 persons were in attendance. Background materials provided to committee members included briefing documents from the sponsor and the FDA.

### Call to Order

The meeting was called to order by Scott Hammer, MD, Chair, at 8:30 a.m. The committee members, guests, and the FDA participants at the table introduced themselves.

### Conflict of Interest Statement

The conflict of interest statement was read by Rhonda Stover, RPh, Executive Secretary. Full waivers were granted to Drs. El-Sadr, Feinberg, Hamilton, Hammer, Masur and Wittes. Additionally, a disclosure was reported for Dr. Hammer.

### Introduction

Debra Birnkrant, MD, Deputy Director, Division of Antiviral Drug Products, Office of Drug Evaluation IV, FDA, gave the FDA introductory remarks. Dr. Birnkrant reviewed the rationale for zanamivir's priority review status and the reasons for the advisory committee meeting.

### Sponsor Presentation

Marc Rubin, MD introduced the sponsor's presentation. Frederick Hayden, MD gave an overview of influenza. Michael Ossi, MD discussed the efficacy of zanamivir. Michael Elliott, MD addressed the safety and viral susceptibility of zanamivir.

### FDA Presentation

Barbara Styrt, MD introduced the FDA presentation. Michael Elashoff, PhD presented the statistical review of zanamivir. Dr. Styrt further discussed the clinical efficacy summary and the safety data.

### Open Public Hearing

There were no participants for the open public hearing.

Questions to the Committee
(Total votes=17)

1. Does the information presented by the applicant support the safety and effectiveness of zanamivir for treatment of influenza?

**Vote: Yes=4**
**No=13**

**In general, there were no concerns with zanamivir's safety profile. However, the majority of the Committee did not support the claim of zanamivir's effectiveness based on the information presented. The majority of the Committee agreed that the International data (studies NAIB3001 and NAIB3002) showed significant treatment effects that were not apparent in the US data (study NAIA3002) which showed the least evidence of treatment effects.**

If no, what additional studies are needed?

**There was some overlap between additional studies for licensure and future post-marketing studies. Proposed additional studies included studies targeting high risk populations (asthma, COPD, immunocompromised, geriatric, pediatric), viral transmission, family studies, reexposure, and resistance. Studies using zanamivir for prophylaxis and in comparison with rimantadine were also mentioned. Proposed improvements to trial design included block randomization, earlier initiation of treatment, qualitative and quantitative virology, and the timed use of concomitant and relief medications.**

If yes, please address questions 2 through 7.

**Many of the issues associated with these questions surfaced throughout the committee's deliberations. However, since the majority of the committee voted no to question 1, questions 2-7 were not formally addressed. They are included in this document for reference only.**

2. What patients should be offered treatment with this drug based on the available evidence? Please consider the contribution of patient population group, underlying diseases, characteristics of influenza-like illness at presentation, and any other factors you may propose as potentially relevant.

3. How would you describe to a prospective patient the anticipated benefit of treatment? Please consider how your advice and information would be altered by patient risk factors or by knowledge of circulating strains of influenza virus.

4. What additional information (for example, additional studies in specific populations, or post-marketing surveillance activities) would be desirable to guide optimal use of this drug?

5. Please discuss what additional information regarding viral resistance would be useful and what methods and plans you would consider desirable for resistance surveillance.

6. Please discuss your recommendations for education of patients, physicians, and other health care providers in the appropriate use of this drug and its delivery system.

7. Please discuss your recommendations for design of future studies of influenza treatment.

The meeting was adjourned at 4:05 p.m.