FDA Approves Bayer's Next Generation Formulation of Recombinant Factor VIII (rFVIII) for Hemophilia A

Significant development for nearly 13,000 Americans

Leverkusen, June 28, 2000 — Bayer announced today that the U.S. Food and Drug Administration approved Kogenate® FS Antihemophilic Factor (Recombinant), Formulated with Sucrose [rFVIII FS], a new formulation of recombinant factor VIII for the treatment of hemophilia A that offers more convenient administration. This is a significant development for the nearly 13,000 Americans who are living with this life-threatening disease.

- Kogenate® FS builds on the 10-year history of clinical experience with its predecessor, Kogenate®, to offer significant new advancements:

- Kogenate® FS does not use Albumin in its purification or formulation. Like Kogenate®, Kogenate® FS fermentation uses highly purified human plasma protein.

-Kogenate® FS includes an additional viral inactivation step (solvent/detergent).

It has a higher concentration and smaller fluid volume, which reduces the intravenous infusion time, thus allowing individuals to infuse more rapidly.

"The approval of Kogenate® FS is a significant advancement in the treatment of hemophilia A. We are taking another step forward toward a time when people with hemophilia will have no fears of viral transmission," said Jan Turek, senior vice president and general manager of Bayer's Biological Products Global Business Unit.

"Bayer, Biological Products, has more than two decades of proven success in the hemophilia market. Kogenate® FS continues our tradition of offering safe and effective therapy to individuals with hemophilia and their physicians," Turek added.

Clinical Data Establish Kogenate® FS Safety and Efficacy

A Phase III clinical study conducted in North America and Europe demonstrated that Kogenate® FS was effective in controlling or preventing bleeding episodes in patients with hemophilia A. In 24 months of home therapy, 71 patients, ages 12 to 59, who were previously treated with other recombinant or plasma-derived factor VIII products received Kogenate® FS. A total of 12,546 infusions were administered in this

portion of the study, or 22.4 million units of Kogenate® FS, Antihemophilic Factor (Recombinant), Formulated with Sucrose. Treatment of 2,585 bleeding episodes during the study period required 3,648 infusions of Kogenate® FS. The majority of bleeding episodes (93.5 percent) was treated successfully with one or two infusions. Regularly scheduled treatment accounted for 75 percent of infusions administered on study.

Fifteen study participants received Kogenate® FS on 22 occasions to prevent bleeding during surgery. These surgeries included minor and major procedures ranging from tooth extractions and circumcisions to total knee replacements and the removal of a brain tumor. Hemostasis was good or excellent in all cases. Side effects occurring in the clinical trial associated with the infusions were reported at a rate of 0.2 percent and were considered "mild" or "moderate." The most frequently reported adverse events were local injection site reaction, dizziness and rash.

"Clinical studies were performed according to international guidelines and standards and demonstrate that Kogenate® FS provides excellent and safe hemostatic control of bleeding episodes in patients with hemophilia A. This new product is the latest example of Bayer's commitment to improve and extend the lives of people with hemophilia," stated Peter Larson, M.D., international clinical project director for Kogenate® FS.

Safety Key for People with Hemophilia

The introduction of Kogenate®, Bayer's first recombinant factor VIII product, in 1993, represented a significant improvement over plasma-derived factor VIII products in reducing the risk for viral transmission. To date, more than two billion units of Kogenate® have been infused since its introduction without any confirmed reports of viral transmission. Still, for people with hemophilia, the theoretical risk of viral transmission has remained a concern. To address this concern, Bayer researchers developed and patented a new sucrose formulation to be used in place of human plasma protein (Albumin) (which is now used as a stabilizer for Kogenate®); they also refined the purification process and added an additional viral inactivation step.

Treating Individuals with Hemophilia Worldwide

Bayer anticipates the market introduction of Kogenate® FS in the third quarter of 2000. In the United States, Bayer will distribute the product under the trade mark Kogenate® FS, while Aventis-Behring, Bayer's long-term partner for hemophilia products, will distribute it in the United States as Helixate®FS. Currently, Kogenate® FS is approved and available in New Zealand and Switzerland, and has received a positive opinion from the Committee for the Proprietary Medicinal Products in Europe and Bayer is waiting for EU Commission approval shortly..

Kogenate® FS will be manufactured at Bayer's state-of-the-art

biotechnology facility in Berkeley, Calif.

The Effect of Hemophilia

Hemophilia is an inherited bleeding disorder characterized by prolonged or spontaneous bleeding, especially into the muscles, joints, or internal organs. The disease is caused by deficient or defective blood coagulation proteins, which are either factor VIII or IX. The most common form of the disease is hemophilia A, or classic hemophilia, in which the clotting factor VIII is either deficient or defective. Hemophilia B is characterized by deficient or defective factor IX.

According to the National Hemophilia Foundation, approximately 12,750 people in the United States live with hemophilia A and 2,250 live with hemophilia B. The World Federation of Hemophilia estimates that more than 350,000 people globally have a form of the disease.

The Bayer Biological Products Business Unit, headquartered in Research Triangle Park, North Carolina (USA), is responsible for the global development and marketing of Kogenate® FS.