

For Immediate Release
December 1, 2009

Media Contact:
Lori Gorski
(617) 768-9344
Lori.gorski@genzyme.com

Investor Contact:
Emily Merchant
(617) 768-6140

Genzyme Begins Shipping Newly Produced Cerezyme from Allston Plant

Company provides update on product supply

CAMBRIDGE, Mass. – Genzyme Corporation (NASDAQ: GENZ) announced today that it has begun shipping vials of newly produced Cerezyme® (imiglucerase for injection) manufactured at its Allston Landing plant. The company also provided an update on its progress to restore supplies of Cerezyme and Fabrazyme® (agalsidase beta) for patients worldwide.

The initial Cerezyme shipments will provide uninterrupted treatment for the most vulnerable patients under the current supply conservation guidelines. By the end of this month, Genzyme will expand shipments of Cerezyme to patients worldwide who have experienced interruptions in their treatment this year. The company expects that it can meet anticipated worldwide demand and allow all patients to return to their normal infusion and dosing regimen during the first quarter of next year. Patients have been asked to contact their treating physicians for information on the timing and process to re-start their infusion program.

Genzyme is also preparing to ship vials of newly produced Fabrazyme from the Allston plant. The first two bioreactor runs of Fabrazyme have completed their production cycles, and the output from these runs has been at the low end of Genzyme experience. The company is currently producing Fabrazyme at a rate of approximately 70 percent of anticipated demand for 2010, and is intensively working to improve the productivity of Fabrazyme manufacturing.

Genzyme will continue to ship 30 percent of Fabrazyme demand during the first quarter of 2010 to ensure continued treatment for all patients and to build inventory to begin shipping 70-100 percent of demand in the second quarter. The range and timing of shipments depends on restarting fill/finish for Fabrazyme at the Allston facility and on restoring the overall productivity of Fabrazyme manufacturing. Genzyme will have more information and will communicate further details about Fabrazyme supply in February 2010.

“Shipping the first new product manufactured in Allston is a critical milestone in our effort to again fully meet the needs of patients with Gaucher and Fabry disease around the world,” said Henri A. Termeer, Genzyme’s chairman and chief executive officer. “We continue to work in a very intense and comprehensive way to build a world-class manufacturing program and to ensure continuous supply of these products in the future.”

About Gaucher Disease

Cerezyme is an approved treatment for Gaucher disease, an inherited condition affecting fewer than 10,000 people worldwide. People with Gaucher disease do not have enough of an enzyme, β -glucosidase (glucocerebrosidase), to break down a certain type of fat molecule. As a result, lipid engorged cells (called Gaucher cells) amass in different parts of the body, primarily the spleen, liver and bone marrow. Accumulation of Gaucher cells may cause spleen and liver enlargement, anemia, excessive bleeding and bruising, bone disease and a number of other signs and symptoms.

About Fabry Disease

Fabrazyme is an approved treatment for Fabry disease, an inherited condition that is characterized by excessive accumulation of the lipid GL-3 in various organs and tissues, which over time can cause renal, cardiac and cerebrovascular events. As a result, patients with Fabry disease typically have a shortened life span, and children must often cope with significant pain and disability. Fabry disease is an inherited and life threatening disease linked to the X chromosome which affects approximately 5,000 patients in the world.

About Genzyme

One of the world's leading biotechnology companies, Genzyme is dedicated to making a major positive impact on the lives of people with serious diseases. Since 1981, the company has grown from a small start-up to a diversified enterprise with more than 11,000 employees in locations spanning the globe and 2008 revenues of \$4.6 billion.

With many established products and services helping patients in approximately 100 countries, Genzyme is a leader in the effort to develop and apply the most advanced technologies in the life sciences. The company's products and services are focused on rare inherited disorders, kidney disease, orthopaedics, cancer, transplant and immune disease, and diagnostic testing. Genzyme's commitment to innovation continues today with a substantial development program focused on these fields, as well as cardiovascular disease, neurodegenerative diseases, and other areas of unmet medical need.

This press release contains forward looking statements regarding Genzyme's future business plans and strategies, including its estimates of: when it will ship Fabrazyme and Cerezyme; how much of the anticipated demand those shipments will satisfy; when it will be able to meet full demand for the products; and when it will be in a position to provide additional information. These forward looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those forecasted. These risks and uncertainties include: that production of Fabrazyme and Cerezyme does not continue as planned due to any reason, including bacterial or viral contamination, mechanical failures, cell growth at lower than expected levels, and regulatory issues; that restarting fill/finish at Allston is delayed, is unsuccessful or is inefficient; that Genzyme has not forecasted anticipated product demand accurately that the period of shortage and dose conservation for Cerezyme and/or Fabrazyme is extended; that Genzyme is unable to improve the productivity of Fabrazyme manufacturing; and the risks and uncertainties described in reports filed by Genzyme with the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, including without limitation the information under the heading "Risk Factors" in Genzyme's Quarterly Report on Form 10-Q for the quarter ending September 30, 2009. Genzyme cautions investors not to place substantial reliance on the forward-looking statements contained in this press release. These statements speak only as of the date of this press release, and Genzyme undertakes no obligation to update or revise these statements.

Genzyme[®], Cerezyme[®] and Fabrazyme[®] are registered trademarks of Genzyme Corporation or its subsidiaries. All rights reserved.

Genzyme's press releases and other company information are available at www.genzyme.com and by calling Genzyme's investor information line at 1-800-905-4369 within the United States or 1-678-999-4572 outside the United States.