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**GTC BIOTHERAPEUTICS TAKES EQUITY POSITION IN MERRIMACK
PHARMACEUTICALS AS MM-093 DEVELOPMENT ADVANCES**

FRAMINGHAM, MA –December 15, 2003 -- GTC Biotherapeutics, Inc. (Nasdaq: GTCB; "GTC") and Merrimack Pharmaceuticals, Inc. (Merrimack) announced that they have amended the terms of their agreement for the production and purification of MM-093 by GTC. Under the revised terms, GTC will convert \$1.25 million of the payments owed by Merrimack into Merrimack preferred stock. GTC will also obtain a royalty on end user sales of MM-093 as a result of this agreement. This amendment enables GTC, as a holder of preferred stock in Merrimack, to participate in a larger portion of the potential value of MM-093. GTC is also granting an additional deferment to June 30, 2004 of up to \$650,000 in payments owed by Merrimack.

"MM-093 has made good progress in its Phase I study," stated Geoffrey F. Cox, Ph.D., GTC's Chairman of the Board and Chief Executive Officer. "GTC is very pleased to enhance its participation in this strategic alliance."

"We are pleased to expand our relationship with GTC for the clinical production of MM-093," stated Robert Mulroy, Merrimack's President and Chief Executive Officer. Mr. Mulroy continued, "We believe that MM-093 has significant potential as an important and novel therapeutic option in a number of significant autoimmune diseases such as rheumatoid arthritis, multiple sclerosis and others."

Merrimack is focusing the development of MM-093 on select autoimmune diseases including rheumatoid arthritis and multiple sclerosis - areas in which published and proprietary pre-clinical data provide a compelling rationale for its use, and in which significant unmet medical needs still exist.

Merrimack recently completed dosing in its Phase I trial, which is examining the safety, tolerability, and pharmacokinetics of MM-093 in healthy volunteers. A total of 42 subjects in six dose groups completed the single ascending dose portion of the study. An additional 16 volunteers in two dose groups have been dosed in the multiple dose portion of the study, receiving up to 7 doses of MM-093 over a 28-day period. The double-blind, placebo-controlled Phase I study is being conducted at the Guy's Drug Research Unit in London, which is operated by Quintiles, Ltd.

Merrimack is planning a pilot study which is designed to assess safety and tolerability of MM-093 in patients with rheumatoid arthritis (RA) and to evaluate the relationship between pharmacokinetics and a number of pharmacodynamic markers. The pilot study will aid Merrimack in the planning of future clinical studies in RA, as well as studies in other autoimmune patient populations. GTC is producing additional MM-093 material to support these further clinical studies.

Under the equity agreement, GTC is obtaining preferred stock in Merrimack at the same valuation as the other investors involved in its current round of financing. In addition to the conversion to equity and the deferment of some of the current money owed, there will continue to be cash payments payable by Merrimack to GTC in accordance with the production and purification agreements which remain in effect.

MM-093 is a recombinant version of human alpha-fetoprotein (AFP), which is produced in transgenic goats by GTC in collaboration with Merrimack Pharmaceuticals, Inc. Recombinant AFP has been difficult to express and purify in an active form using traditional bioreactor-based production systems. Merrimack's MM-093 is the second protein using GTC's production technology to enter human clinical studies. GTC's proprietary recombinant human antithrombin III (rhATIII) product was the first transgenic program to enter human clinical studies. RhATIII is nearing completion of its efficacy study in Europe for the hereditary deficiency indication.

Merrimack Pharmaceuticals, Inc. is a biotechnology company focused on the discovery and development of novel treatments for diseases in the areas of immunology and oncology. Founded by leading scientists from MIT and Harvard, the company's proprietary "Network Biology" discovery platform enables the high throughput profiling of protein networks as a basis for improved validation, lead identification and speed in the development of innovative, effective and safe therapeutics. Merrimack is a privately held company based in Cambridge, Massachusetts. For additional information, please visit www.merrimackpharma.com.

GTC Biotherapeutics is a leader in the development, production, and commercialization of therapeutic proteins through transgenic animal technology. GTC has more than a dozen programs in development, including its internal proprietary products. In addition to the rhATIII program, which is in clinical trials, GTC is developing a recombinant human serum albumin and a malaria vaccine. In GTC's external programs, GTC's technology is used to develop transgenic production of the partners' proprietary products, including both large-volume protein therapeutics as well as products that are difficult to produce in significant quantities from conventional bioreactor systems. GTC's external program collaborations are developing transgenic versions of products such as monoclonal antibodies and immunoglobulin fusion proteins for conditions such as rheumatoid arthritis, HIV/AIDS and cancer. One of the external programs recently entered clinical trials with a transgenically produced product. Additional information is available on the GTC web site, <http://www.gtc-bio.com>.

Forward-Looking Statement for GTC Biotherapeutics

This press release contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, including without limitation statements regarding the future plans to develop MM-093 in clinical studies and the anticipated compensation for GTC's work in this program. Such forward-looking statements are subject to a number of risks, uncertainties and other factors that could cause actual results to differ materially from future results expressed or implied by such statements. Factors that may cause such differences include, but are not limited to, the risks and uncertainties discussed in GTC's most recent Annual Report on Form 10-K and its other periodic reports as filed with the Securities and Exchange Commission, including the risks and uncertainties associated with conducting clinical studies, and the risks and uncertainties associated with dependence upon the actions of partners and regulatory agencies. GTC cautions investors not to place undue reliance on the forward-looking statements contained in this release. These statements speak only as of the date of this document, and GTC undertakes no obligation to update or revise the statements, except as may be required by law.