First Participants Dosed in Clinical Study with DuoBody® Product

Media Release

- **Treatment of first study participants with DuoBody product marks clinical progress in collaboration with Janssen**

Copenhagen, Denmark; May 20, 2016 – Genmab A/S (Nasdaq Copenhagen: GEN) announced today that the first participants have been dosed in a clinical study of a DuoBody® bispecific antibody under Genmab's DuoBody technology platform collaboration with Janssen Biotech, Inc. (Janssen). The Phase I study investigates the human bispecific antibody JNJ-61178104, which is directed to two inflammatory disease targets, for potential use in treating autoimmune disorders.

Genmab will receive a $2 million milestone payment for the progress in the study.

The DuoBody collaboration with Janssen has been a productive one marked by rapid progress with a total of 12 programs activated. Seven clinical candidates have been selected for development by Janssen and three DuoBody programs are entering the clinic.

"Genmab's DuoBody platform creates bispecific antibodies that can be directed to two targets at once and we believe the technology has the potential to offer fundamentally new treatment options for certain diseases including inflammatory diseases and cancer. Today's news marks the first time a DuoBody product has been administered in a clinical study and is a significant step forward for the DuoBody platform and a credit to our scientists who invented this innovative and highly versatile next generation antibody technology," said Jan van de Winkel, Ph.D., Chief Executive Officer of Genmab.

About the DuoBody Technology Collaboration with Janssen
Under the original July 2012 agreement, Janssen has the right to use the DuoBody technology to create panels of bispecific antibodies (up to 10 DuoBody programs) to multiple disease target combinations. Genmab received an upfront payment of $3.5 million from Janssen and will potentially be entitled to milestone and license payments of up to approximately $175 million, as well as royalties for each commercialized DuoBody product.

Under the terms of a December 2013 amendment, Janssen is entitled to work on up to ten additional programs. Genmab received an initial payment of $2 million from Janssen. For each of the ten additional programs that Janssen successfully initiates, develops and commercializes, Genmab will potentially be entitled to receive average milestone and license payments of approximately $191 million. In addition, Genmab will be entitled to royalties on sales of any commercialized products.

About the DuoBody Platform
The DuoBody platform is an innovative platform for the discovery and development of bispecific antibodies that may improve antibody therapy of cancer, autoimmune, infectious and central nervous system disease. Bispecific antibodies bind to two different epitopes either on the same, or on different targets (also known as dual-targeting) which may improve the antibodies' specificity and efficacy. DuoBody molecules are unique in combining the benefits of bispecificity with the strengths of conventional antibodies which allows DuoBody molecules to be administered and dosed as other antibody therapeutics. Genmab's DuoBody platform generates bispecific antibodies via a fast and broadly applicable process which is easily performed at standard bench, as well as commercial, manufacturing scale.

About Genmab
Genmab is a publicly traded, international biotechnology company specializing in the creation and development of differentiated antibody therapeutics for the treatment of cancer. Founded in 1999, the company has two approved antibodies, Arzerra® (ofatumumab) for the treatment of certain chronic

First Participants Dosed in Clinical Study with DuoBody® Product

lymphocytic leukemia indications and DARZALEX® (daratumumab) for the treatment of heavily pretreated or double refractory multiple myeloma. Daratumumab is in clinical development for additional multiple myeloma indications and for non-Hodgkin's lymphoma. Genmab also has a broad clinical and pre-clinical product pipeline. Genmab's technology base consists of validated and proprietary next generation antibody technologies - the DuoBody® platform for generation of bispecific antibodies, and the HexaBody® platform which creates effector function enhanced antibodies. The company intends to leverage these technologies to create opportunities for full or co-ownership of future products. Genmab has alliances with top tier pharmaceutical and biotechnology companies. For more information visit www.genmab.com.

Contact:
Rachel Curtis Gravesen, Senior Vice President, Investor Relations & Communication
T: +45 33 44 77 20; M: +45 25 12 62 60; E: r.gravesen@genmab.com

This Media Release contains forward looking statements. The words "believe", "expect", "anticipate", "intend" and "plan" and similar expressions identify forward looking statements. Actual results or performance may differ materially from any future results or performance expressed or implied by such statements. The important factors that could cause our actual results or performance to differ materially include, among others, risks associated with pre-clinical and clinical development of products, uncertainties related to the outcome and conduct of clinical trials including unforeseen safety issues, uncertainties related to product manufacturing, the lack of market acceptance of our products, our inability to manage growth, the competitive environment in relation to our business area and markets, our inability to attract and retain suitably qualified personnel, the unenforceability or lack of protection of our patents and proprietary rights, our relationships with affiliated entities, changes and developments in technology which may render our products obsolete, and other factors. For a further discussion of these risks, please refer to the risk management sections in Genmab's most recent financial reports, which are available on www.genmab.com. Genmab does not undertake any obligation to update or revise forward looking statements in this Media Release nor to confirm such statements in relation to actual results, unless required by law.