Genmab A/S Kalvebod Brygge 43 1560 Copenhagen V Denmark

July 12, 2019

Via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-3561

Attn: Tonya K. Aldave, Dietrich King, Isaac Esquivel and Kate Tillan

RE: Genmab A/S

Registration Statement on Form F-1

File No. 333-231777

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended (the "Securities Act"), Genmab A/S (the "Company") hereby requests that the effective date of the above-referenced Registration Statement (the "Registration Statement") be accelerated by the Securities and Exchange Commission so that the Registration Statement, as then amended, will be declared effective under the Securities Act at 4:00 p.m. Eastern Daylight Time on July 16, 2019, or as soon thereafter as is practicable, or such other time as the Company or its outside counsel, Shearman & Sterling LLP, may request by telephone that such Registration Statement be declared effective.

We request that we be notified of such effectiveness by a telephone call to Harald Halbhuber of Shearman & Sterling LLP at (212) 848-7150 and that such effectiveness also be confirmed in writing.

Very truly yours,

Genmab A/S

/s/ Birgitte Stephensen

By: Birgitte Stephensen

Title: Senior Vice President, IPR & Legal

cc: Harald Halbhuber, Esq. Shearman & Sterling LLP