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(71) Applicant: AMGEN INC. [US/US]; One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US).

(72) Inventors: STEVENS, Jennitte LeAnn; c/o Amgen Inc., One Amgen Center Drive, Legal Dept-Patent Operations, M/S 28-5-A, Thousand Oaks, California 91320-1799 (US). TEMEL, Deniz; c/o Amgen Inc., One Amgen Center Drive, Legal Dept-Patent Operations, M/S 28-5-A, Thousand Oaks, California 91320-1799 (US). ESTES, Bram; c/o Amgen Inc., One Amgen Center Drive, Legal Dept-Patent Operations, M/S 28-5-A, Thousand Oaks, Califor-

nia 91320-1799 (US). AGRAWAL, Neeraj Jagdish; c/o Amgen Inc., One Amgen Center Drive, Legal Dept-Patent Operations, M/S 28-5-A, Thousand Oaks, California 91320-1799 (US).

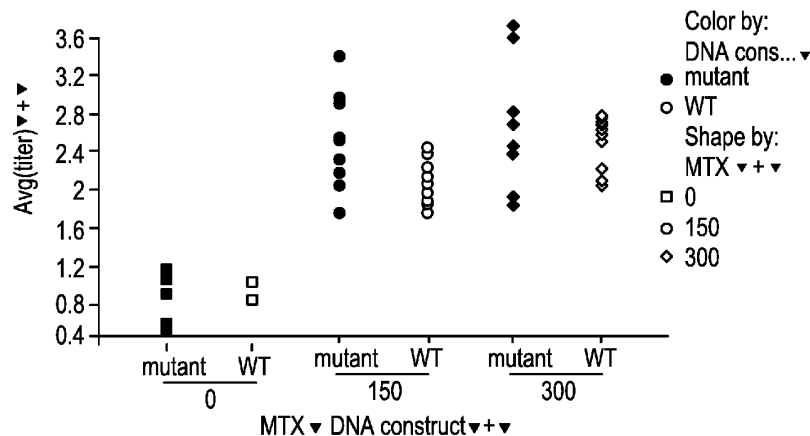
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(54) Title: ENGINEERING MONOCLONAL ANTIBODIES TO IMPROVE STABILITY AND PRODUCTION TITER

FIG. 1A

Avg(titer) vs. MTX, DNA construct

(57) Abstract: Presented herein are methods directed to engineering monoclonal antibodies and antibody variants to improve stability and their production in culture. Specifically, the monoclonal antibodies can be engineered at heavy chain residue 56 (A_{Ho} numbering) to a glycine, alanine, or serine, and/or engineered at position 80 (A_{Ho}) to be a hydrophobic residue such as alanine, isoleucine, phenylalanine, leucine, methionine, or valine.

[Continued on next page]

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
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