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

(72) Inventors: BEAVER, Matt; 50 Park Avenue, Natick, Massachusetts 01760 (US). CUI, Sheng; 391 Lincoln Street, Lexington, Massachusetts 02421 (US). SHI, Xian-qing; 477 Fallbrook Avenue, Newbury Park, California 91320 (US).

(74) Agent: REDDY, G. Prabhakar; One Amgen Center Dr., Thousand Oaks, California 91320 (US).

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(54) Title: SYNTHESIS OF (S)-2-AMINO-4-METHYL-1-((R)-2-METHYLOXIRANE-2-YL)-PENTAN-1-ONE AND PHARMACEUTICALLY ACCEPTABLE SALTS THEREOF

(57) Abstract: The present invention provides new methods for preparing compound (5), and pharmaceutically acceptable salts thereof, of structure. Compound (5), or a pharmaceutically acceptable salt thereof, is an important intermediate in the synthesis of carfilzomib. The invention further provides methods of making a useful manganese catalyst that may be used in the epoxidation step of the present invention.

