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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.
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(54) **Title:** COMPOSITIONS AND METHODS FOR PRODUCING REBAUDIOSIDE M

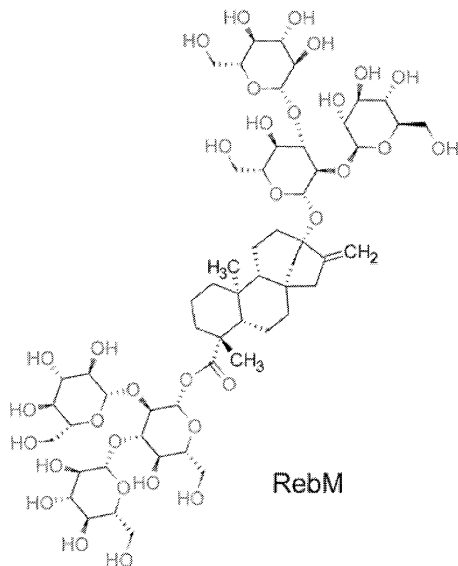


FIG. 1

(57) **Abstract:** The present disclosure provides enzymes and a method to use those enzymes to transfer a sugar moiety to a substrate steviol glycoside. The designed beta-1,3-glycosyltransferases can add beta-1,3 linked glucose monomers to steviol glycosides. Specifically, the designed beta-1,3-glycosyltransferases are used in a one-pot reaction with a beta-1,2-glycosyltransferase and sucrose synthase to convert stevioside and/or Reb A into Reb M.

Declarations under Rule 4.17:

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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