

The present invention relates to a method for preparing an N-[(aliphatic or aromatic)carbonyl]-2-aminoacetamide compound of formula (I) wherein R_a is (II), R_{aa} is hydrogen, optionally substituted aliphatic or optionally substituted aromatic; R_b is hydrogen, optionally substituted aliphatic or optionally substituted aromatic; R_{ca} and R_{cb} are independently hydrogen, optionally substituted aliphatic or optionally substituted aromatic; R_d is (III); and R_{da} is optionally substituted aliphatic or optionally substituted aromatic; and R_{aa} is substituted with a primary or secondary protected amine that upon deprotection can react with the *ab or *db carbon, or at least one of R_b , R_{ca} or R_{cb} where each is at least substituted with an activated carboxylic acid to form a 5-7 membered cyclic ring; or R_b is substituted with a primary or secondary protected amine that upon deprotection can react with the *ab or *db carbon, or at least one of R_{aa} , R_{ca} or R_{cb} where each is at least substituted with an activated carboxylic acid to form a 5-7 membered cyclic ring; or R_{ca} and R_{cb} are independently substituted with a primary or secondary protected amine that upon deprotection can react with the *ab or *db carbon, or at least one of R_{aa} , R_b , R_{ca} , R_{cb} or R_{da} where each is at least substituted with an activated carboxylic acid to form a 5-7 membered cyclic ring; or R_{da} is substituted with a primary or secondary protected amine that upon deprotection can react with at least one of R_{ca} or R_{cb} where each is at least substituted with an activated carboxylic acid to form a 5-7 membered cyclic ring, provided that when R_{aa} is substituted with a primary or secondary protected amine that upon deprotection can react with R_b at least substituted with an activated carboxylic acid, then R_{aa} is other than substituted aliphatic, comprising reacting the following four compounds: a carbonyl compound of formula (IV), an amine compound of formula NH_2R_d , an isonitrile compound of formula NCR_{da} , and an acid compound of formula R_aCO_2H , to produce the N-[(aliphatic or aromatic)carbonyl]-2-aminoacetamide compound, and the N-[(aliphatic or aromatic)carbonyl]-2-aminoacetamide compound. The invention is also directed to a method for cyclizing N-[(aliphatic or aromatic)carbonyl]-2-aminoacetamide compound to a cyclic compound selected from the group consisting of a 1,4-benzodiazepine-2,5-dione derivative, diketopiperazine derivative, ketopiperazine derivative, lactam derivative, 1,4-benzodiazapine derivative and dinydroquinoxalinones derivative, and the cyclized compound.

