

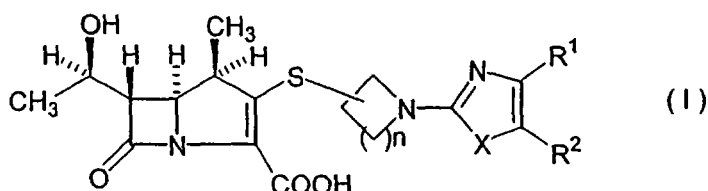


162162

Abstract:

The present invention relates to 1-methylcarbapenem compounds having excellent antibacterial activity, pharmacologically acceptable ester derivatives thereof, pharmacologically acceptable salts thereof, pharmaceutical compositions (particularly antibacterial agents) containing them as active ingredient, use of the compounds, ester derivatives or salts thereof for preparing such pharmaceutical compositions and a method of preventing or treating diseases (particularly bacterial infections) in which a pharmacologically effective amount of the compound, ester derivative or salt is administered to a warm-blooded animal (particularly a human being).

The 1-methylcarbapenem compounds of the present invention are represented by the general formula (I):



G00002

wherein:

R¹ is a group represented by the formula COOR³ (wherein R³ represents a hydrogen atom, a C₁-C₆ alkyl group or the like), a group represented by the formula CONR⁴R⁵ (wherein R⁴ and R⁵ each independently represent a hydrogen atom, a C₁-C₆ alkyl group which may be substituted or the like), a cyano group, a group represented by the formula CH₂OR⁶ (wherein R⁶ represents a hydrogen atom, a C₁-C₆ alkyl group or the like) or a group represented by the formula CH₂NR⁷R⁸ (wherein R⁷ represents a hydrogen atom, a C₁-C₆ alkyl group or the like, and R⁸ represents a hydrogen atom, a C₁-C₆ alkyl group, a C₁-C₆ alkanoyl group, a C₁-C₆ alkoxy carbonyl group or the like);

R² represents a hydrogen atom or a C₁-C₆ alkyl group;

n represents 1, 2 or 3; and

X represents a sulfur atom or an oxygen atom.