PYRIDINE DERIVATIVE

ABSTRACT

The problem to be solved by the present invention is to provide a compound suitable for a pharmaceutical composition, specifically a pharmaceutically composition for treating nocturia.

The inventors have assumed that inhibition of nocturnal activity of placental leucine aminopeptidase (P-LAP), i.e. aminopeptidase that cleaves AVP, would maintain and/or increase an endogenous AVP level to enhance the antidiuretic effect, which would contribute to a decreased number of nocturnal voids, and have extensively studied compounds which inhibit P-LAP.

As a result, the inventors have found that (2R)-3-amino-2-{[4-(substituted pyridine)-2-yl]methyl}-2-hydroxy-propanoic acid derivatives have excellent P-LAP inhibitory activity. The inventors have evaluated antidiuretic effects in water-loaded rats and have found that the compounds increase endogenous AVP levels by inhibiting P-LAP and consequently reduce urine production. The present invention therefore provides compounds expected to be used as an agent for treating nocturia based on P-LAP inhibition.