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Saudi Pharmaceutical Journal Open Access
Volume 25, Issue 7, November 2017, Pages 967-971

Novel essential amino acid-sulfanilamide hybrid as safe anti-ulcerogenic agent with anti-helicobacter pylori activity (Article) (Open Access)

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Abstract

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A novel and safe essential amino acid (Leucine) incorporating sulfanilamide was synthesized, and evaluated for its anti-ulcerogenic activity and in vitro anti-Helicobacter pylori activity. The new molecule showed a dose dependent activity against absolute ethanol-induced ulcer in rats, it produced percent protection of control ulcer by 66.7 at dose 100 mg/kg. In addition it showed a potent anti-Helicobacter pylori activity in vitro against 7 clinically isolated strains. The minimum inhibitory concentration (MIC) ranged from 12.5 to 50 μg/ml. The preliminary safety studies and toxicity profile are optimistic and encouraging. © 2017

Reaxys Database Information

View Compounds

Author keywords

Amino acid Anti-Helicobacter pylori Anti-ulcerogenic agent In-vitro Natural products hybrid Sulfanilamide

Indexed keywords

EMTREE drug terms: 4 methyl 2 [2 oxo 2 (4 sulfamoylphenylamino)ethylamino]pentanoic acid alanine aminotransferase amoxicillin antiulcer agent aspartate aminotransferase creatinine erythromycin leucine ranitidine sulfanilamide derivative unclassified drug

EMTREE medical terms: alanine aminotransferase blood level antibacterial activity antihelicobacter pylori activity antiulcer activity antiulcerogenic activity Article aspartate aminotransferase blood level carbon nuclear magnetic resonance clinical article column chromatography controlled study creatinine blood level drug potency drug safety drug synthesis female gastritis human human tissue in vitro study kidney function LD50 liver function male minimum inhibitory concentration mouse nonhuman peptic ulcer proton nuclear magnetic resonance rat stomach biopsy ulceration index urea blood level

Chemicals and CAS Registry Numbers:

alanine aminotransferase, 9000-86-6, 9014-30-6; amoxicillin, 26787-78-0, 34642-77-8, 61336-70-7; aspartate

ISSN: 13190164
CODEN: SPJOE
Source Type: Journal
Original language: English
DOI: 10.1016/j.jsps.2017.02.012
Document Type: Article
Publisher: Elsevier B.V.

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