

Compounds with *Helicobacter*-specific antibacterial activity

■ Researcher Profile

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■ Research Ideas and Technological Seeds

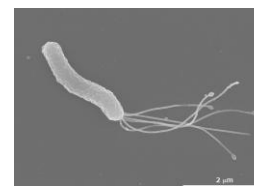
- Intervenolin derivative AS-1934 exhibits *H. pylori*-specific antibacterial activity.
- In mouse models of *H. pylori* infection, AS-1934 demonstrated eradication efficacy as a monotherapy.
- AS-1934 is highly stable under acidic conditions, suggesting that it can exert antibacterial effects in the low-pH gastric environment without the need for acid-suppressive agents.
- The antibacterial activity of AS-1934 is mediated by inhibition of the pyrimidine biosynthesis pathway in *H. pylori*.
- AS-1934 may also be effective against *Helicobacter* species other than *H. pylori*.

■ Background / Problem to be Solved

- The standard eradication therapy for *Helicobacter pylori* (*H. pylori*) infection is triple therapy, consisting of a proton pump inhibitor and two antibiotics.
- This triple therapy significantly disrupts the gut microbiota, often causing side effects such as diarrhea.
- From an antimicrobial resistance (AMR) perspective, a treatment specifically targeting *H. pylori* is highly desirable.

■ Research Overview

About *H. pylori*



- Infects the human stomach and is a major cause of gastric cancer and peptic ulcer.
- Approximately 30–40% of *H. pylori* strains are resistant to clarithromycin, a key antibiotic used in eradication therapy.

■ Future plans

- A domestic patent for the Intervenolin derivative AS-1934 has already been obtained by the Institute of Microbial Chemistry.