
Abstract
Methanol extracts of the rhizomes of Sanguinaria canadensis, and the roots and rhizomes of Hydrastis canadensis, two plants used traditionally for the treatment of gastrointestinal ailments, were screened for in vitro antibacterial activity against 15 strains of Helicobacter pylori. The rhizome extracts, as well as a methanol extract of S. canadensis suspension-cell cultures inhibited the growth of H. pylori in vitro, with a MIC50 range of 12.5-50.0 μg/ml. Three isoquinoline alkaloids were identified in the active fraction. Sanguinarine and chelerythrine, two benzophenanthridine alkaloids, inhibited the growth of the bacterium, with an MIC50 of 50.0 and 100.0 μg/ml, respectively. Protopine, a protopine alkaloid, also inhibited the growth of the bacterium, with a MIC50 of 100 μg/ml. The crude methanol extract of H. canadensis rhizomes was very active, with an MIC50 of 12.5 μg/ml. Two isoquinoline alkaloids, berberine and β-hydrastine, were identified as the active constituents, and having an MIC50 of 12.5 and 100.0 μg/ml, respectively. Copyright © 2003 John Wiley & Sons, Ltd.