Table S1: List of natural products from plants from the studies included in this systematic review. N/A: the value or test was not tested from the respective study; MIC: minimal inhibitory concentration; MBC: Minimal bactericidal concentration.

Authors	**Name of plant/ compound**	**Fraction/compound with best antibacterial activity**	**Metabolite(s) with anti *H. pylori* activity**	**Assay type**	**MIC**	**MBC**	**Mechanism**
Eftekhari et al. (2021) [22]	*Oliveria decumbens* Vent.	n-hexane	N/A	disc diffusion and agar dilution methods	50 μg/mL	N/A	N/A
Palacios-Espinosa et al. (2021) [23]	*Artemisia ludoviciana*	Estafiatin and eupalitin	Estafiatin and eupalitin	broth microdilution assay	250 μg/mL	15.6 μg/mL (estafiatin) and 31.2 μg/mL (eupalitin)	Anti-urease
Lee et al. (2018) [24]	*Allium hookeri*	Alliin; *Allium hookeri* extract	Alliin	disk agar diffusion method	Allin: 15.6 mm; AHE 100 μg/mL (20.6 mm)	N/A	Anti-urease and gastroprotection
Stenger Moura et al. (2021) [25]	*Mimusops balata* (Sapotaceae) edible fruits	Taxifolin	Taxifolin	broth microdilution assay	625 μg/mL	N/A	Reduced ulcer and anti-oxidant
Lu et al. (2020) [26]	*Zanthoxylum nitidum* (Roxb.) DC.	Root aqueous extract	N/A	N/A	N/A	N/A	Anti-urease
Ngnamek o et al. (2020) [27]	*Spathodea campanulata* P. Beauv. (Bignoniaceae)	SB2, SE3 and flavonol kaempferol	SB2, SE3 and flavonol kaempferol	N/A	N/A	N/A	Anti-urease; Anti *H. pylori* adhesins; Anti *H. pylori* CagA

Park et al. (2018) [28]	Hwanglyeonhaedok-tang (HHT) (combination of plants)	Water decoction	N/A	N/A	N/A	N/A	Reduced *H. pylori* colonization and anti-inflammatory
Ngan et al. (2021) [29]	*Hibiscus rosa-sinensis* red flower	ethyl acetate fraction	N/A	broth microdilution assay	0.2-0.25 mg/mL	1.25-1.5 mg/mL	Antibiofilm activity; conversion of bacteria to coccoid form
Park et al. (2019) [30]	Lycopene (L9879, Sigma-Aldrich)	Lycopene	Lycopene	N/A	N/A	N/A	Reduced expression of cellular signalling important in gastric carcinogenesis
Salinas Ibáñez et al. (2021) [31]	*Solanum granuloso-leprosum* (Dunal)	Granulosin I and proteolytic extract (RAP)	Granulosin I	broth microdilution assay	All strains susceptible granulosain I with MIC from 156.25 to 312.5 μg/mL ; RAP with MIC from 312.5 to 625 μg/mL	granulosin I: 312.5 to 625 μg/mL; 625 to 1,250 μg/mL for RAP	Significantly decreased the expression of pathogenic factors: *omp18*, *ureA*, and *flaA*.
Jin et al. (2020) [32]	*Curcuma wenyujin*	n-Butyl alcohol extract	N/A	N/A	N/A	N/A	Suppressed effects induced by *H. pylori* CagA and VacA
Wang et al. (2018) [33]	*Physalis alkekengi* L. var. franchetii (Solanaceae)	Ethyl acetate fraction	N/A	disk diffusion method	500μg/ml	N/A	Reduced inflammation; gastroprotective
Fahmy et al. (2020) [34]	*Erythrina speciosa* (Fabaceae)	Acetate fraction	N/A	broth microdilution assay	31.25 μg/mL	N/A	Gastroprotective and anti inflammatory

Lee et al. (2019) [35]	*Rubus crataegifolius,Gardenia jasminoides* and *Ulmus macrocarpa*	Standardized plant extracts	N/A	N/A	N/A	N/A	Reduced bacterial load and inflammation
Jung et al. (2020) [36]	H-002119-00-001 from β-caryophyllene	H-002119-00-001	H-002119-00-001 from β-caryophyllene	N/A	N/A	N/A	Improved inflammation and decreased bacterial burden
Li et al. (2022) [37]	*Forsythia*	Phillygenin	Phillygenin	broth microdilution assay	16-32 μg/ml	128 μg/ml	Caused ATP leakage in *H. pylori* cells; antibiofilm; downregulated *H. pylori*'s acid resistance, DNA methylation and capacity for drug efflux; improved immune response
Eftekhari et al. (2019) [38]	*Oliveria decumbens*	Essential oils and thymol	Essential oils and thymol	disc diffusion and agar dilution methods	essential oil: 20.4 μg/mL and thymol: 150 μg/mL	N/A	N/A
Brito et al. (2018) [39]	*Spondias mombin L.*	Ethanolic extract	N/A	broth microdilution	256 μg/mL	N/A	N/A
Prazeres et al. (2019) [40]	*L. ferrea*	Dry extract of *L. ferrea* pods	N/A	broth microdilution	512 μg/mL	512 μg/mL	N/A

Wylie et al. (2022) [41]	*Azadirachta indica* A. Juss	Nimbolide	Nimbolide	broth microdilution	1.25–5 μg/mL	2.5–10 μg/mL	N/A
Peng et al. (2022) [42]	*Syzygium aromaticum*	Aqueous extract and 75% hydroalcoholic extract (HE)	N/A	broth microdilution method	160-320 μg/ml for both antibiotic susceptible and resistant *H. pylori*	AE<4MIC while HE 2-16 MIC	altered the morphology and ultrastructure and down-regulated the virulence genes expression of *H. pylori*; combated the abnormal activation of PI3K-Akt and MAPK signaling pathways
Sabry et al. (2022) [43]	*Cordia africana* Lam.	Methyl rosmarinate	Methyl rosmarinate	broth microdilution method	31.25 ± 0.6 μg/mL	N/A	N/A
Almeida et al. (2019) [44]	*Virola elongata*	The stem bark hydroethanolic extract of the plant	N/A	broth microdilution method	No direct activity	No direct activity	gastroprotective
So et al. (2019) [45]	*Ulmus davidiana* var. japonica	Compounds 1, 11, 18, and 20	new chromane derivative, coumarins, and phenolic compounds	broth microdilution method	25 or 50 μM against two strains of *H. pylori* 51 and 43504	N/A	N/A
Sreeja et al. (2018) [46]	*Sphenodesme involucrata* var. paniculata (C.B. Clarke) Munir (Lamiaceae)	Methanol extract	N/A	broth microdilution	100 μg/mL	N/A	N/A

de Cássia Dos Santos et al. (2019) [47]	*Byrsonima intermedia* A. Juss partitions	Partitions of water and ethyl acetate	N/A	broth microdilution assay	Ethyl acetate partition>0.1000 mg/mL and water partition= 0.500 mg/mL	N/A	Gastroprotective
Abdel-Baki et al. (2022) [48]	*Iris confusa*	Polar fractions and iregenin	Ireginin	broth microdilution assay	62.50 µg/mL	N/A	Potential COX2 inhibitor
Kim et al. (2022) [49]	Korean red ginseng extract	Water extract	N/A	N/A	N/A	N/A	Decreased IL-8; antioxidant activity

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