

Supplementary Table S1. References nucleotide sequences of the 16S rRNA for alignment

Species	Strain/ Isolate	GenBank accession number
<i>Bacillus cereus</i>	CCTCC2012450	OR344781.1
<i>Bacillus mobilis</i>	CK06	OR461808.1
<i>Bacillus wiedmannii</i>	BLV10-2D1	MN368081.1
<i>Bacillus licheniformis</i>	SAR25	ON152396.1
<i>Bacillus licheniformis</i>	Okinawa3	LC768853.1
<i>Bacillus halotolerans</i>	BHFHB3	OR481937.1
<i>Bacillus tequilensis</i>	GTB24	OR478418.1
<i>Bacillus subtilis</i>	GNB10	OR478413.1
<i>Bacillus velezensis</i>	V10sk	MZ502956.1
<i>Bacillus amyloliquefaciens</i>	HBUAS56799	OM302032.1
<i>Bacillus subtilis</i>	EC2	OR016440.1
<i>Bacillus velezensis</i>	TKP	OR514235.1
<i>Bacillus velezensis</i>	ZLP	CP128992.1
<i>Bacillus subtilis</i>	GX S-21	KU904288.1
<i>Bacillus halotolerans</i>	FS1414	KU374973.1
<i>Bacillus cereus</i>	B6	CP133649.1
<i>Bacillus amyloliquefaciens</i>	FZB113	FN662485.1
<i>Bacillus amyloliquefaciens</i>	FZB111	FN662486.1
<i>Bacillus velezensis</i>	TK1	OQ996949.1
<i>Bacillus siamensis</i>	H4	OQ996945.1
<i>Bacillus subtilis</i>	CanL-30	KT580558.1
<i>Bacillus velezensis</i>	CSQXZD26	LC617083.1
<i>Bacillus subtilis</i>	FP-133	LC006095.1
<i>Bacillus velezensis</i>	Y2	LC191186.1
<i>Bacillus anthracis</i>	UAF	LT844654.1
<i>Bacillus thuringiensis</i>	X-1	LC178545.1
<i>Bacillus licheniformis</i>	SQR2	FN650810.1
<i>Bacillus subtilis</i>	B448	LC802086.1
<i>Bacillus subtilis</i>	B375	LC802085.1
<i>Bacillus licheniformis</i>	SBNN1	LC814576.1
<i>Bacillus halotolerans</i>	strain 4	LC785679.1
<i>Bacillus halotolerans</i>	strain 7	LC785682.1
<i>Bacillus halotolerans</i>	P23-R6	LC769473.1
<i>Bacillus halotolerans</i>	P23-S2-1	LC769476.1

Supplementary Table S2. Grapevine Varieties, and Geographic Locations of Isolated strains from rhizosphere and root Samples

Isolates	Grapevine variety	Sampling area	GPS coordinates	Grapevine health status	Growth stage
3213	Cinsault	Rhizosphere	33.692, -5.580	Healthy	Inflorescence
3214	Cinsault	Rhizosphere	33.84953, -5.32501	Healthy	Inflorescence
3215	Grenache	Rhizosphere	33.84953, -5.32501	Healthy	Inflorescence
3215	Grenache	Rhizosphere	33.8193, -5.68429	Healthy	Inflorescence
3216	Cinsault	Rhizosphere	33.8193, -5.68429	Healthy	Inflorescence
3217	Cinsault	Rhizosphere	33.692, -5.580	Healthy	Inflorescence
3218	Grenache	Rhizosphere	33.805, -5.693	Healthy	Inflorescence
3219	Grenache	Rhizosphere	33.850, -5.326	Healthy	Inflorescence
3220	Grenache	Rhizosphere	33.850, -5.326	Healthy	Inflorescence
3221	Grenache	Rhizosphere	33.43132132, -5.35062264	Healthy	Inflorescence
3222	Cabernet sauvignon	Rhizosphere	33.874, -5.213	Healthy	Inflorescence
3223	Cabernet sauvignon	Rhizosphere	33.75777, -5.44379	Healthy	Flowering
3224	Cabernet sauvignon	Rhizosphere	33.75777, -5.44379	Healthy	Flowering
3225	Cabernet sauvignon	Rhizosphere	33.75777, -5.44379	Healthy	Flowering
3226	Cabernet sauvignon	Rhizosphere	33.75777, -5.44379	Healthy	Flowering
3227	Cabernet sauvignon	Rhizosphere	33.75777, -5.44379	Healthy	Flowering
3228	Grenache	Rhizosphere	33.75777, -5.44379	Healthy	Flowering
3229	Grenache	Rhizosphere	33.43132132, -5.35062264	Infected	Flowering
3230	Muscat Italy	Rhizosphere	33.43132132, -5.35062264	Infected	Flowering
3231	Grenache	Rhizosphere	33.918, -6.407	Infected	Flowering
3232	Grenache	Rhizosphere	33.918, -6.407	Infected	Flowering
3233	Grenache	Rhizosphere	33.707, -5.424	Infected	Flowering
3234	Grenache	Rhizosphere	33.707, -5.424	Healthy	Flowering
3235	Grenache	Rhizosphere	33.707, -5.424	Healthy	Flowering
3236	Grenache	Rhizosphere	33.71972, -5.45333	Healthy	Flowering
3237	Grenache	Rhizosphere	33.71972, -5.45333	Healthy	Flowering
3244	Muscat Alexandria	Grapevine Roots	33.71972, -5.45333	Healthy	Flowering
3245	Cabernet sauvignon	Grapevine Roots	33.71027, -5.46128	Healthy	Flowering
S1RLB 1 to 3	Marselan	Rhizosphere	33.71027, -5.46128	Healthy	Flowering
S13LB1 to 3	Marselan	Rhizosphere	33.71027, -5.46128	Infected	Flowering
S13NA1 to 3	Marselan	Rhizosphere	33.71027, -5.46128	Infected	Flowering
S32LB1 to 6	Cabernet sauvignon	Rhizosphere	33.832, -6.121	Infected	Flowering
S3RKB1 to 3	Cabernet sauvignon	Grapevine roots	33.832, -6.121	Healthy	Flowering
S33NA1 to 5	Cabernet sauvignon	Rhizosphere	33.832, -6.121	Healthy	Flowering

S3RLB 1 to 4	Cabernet sauvignon	Grapevine Roots	33.711818, -5.461426	Healthy	Flowering
S4RLB1 to 4	Malbec	Grapevine roots	33.711818, -5.461426	Healthy	Flowering
S42NA 1 to 7	Malbec	Rhizosphere	33.711818, -5.461426	Healthy	Fruit set
S42KB 1 To 6	Malbec	Rhizosphere	33.98861, -5.68033	Healthy	Ripening
S52NA1 to 5	Sauvignon Blanc	Rhizosphere	33.98861, -5.68033	Healthy	Flowering
S5RLB1 to 6	Sauvignon Blanc	Grapevine Roots	33.98861, -5.68033	Healthy	Flowering
S5RKB1 to 4	Sauvignon Blanc	Grapevine Roots	33.79999, -5.37027	Healthy	Flowering
S6RKB1 to 7	Chardonnay	Grapevine Roots	33.79999, -5.37027	Healthy	Flowering
S6RLB1 to 4	Chardonnay	Grapevine Roots	33.79999, -5.37027	Healthy	Flowering
S62NA1 to 8	Chardonnay	Rhizosphere	33.79999, -5.37027	Infected	Veraison
S82LB1 to 6	Cabernet franc	Rhizosphere	33.79999, -5.37027	Infected	Veraison
S9RKB1 to 4	Syrah	Grapevine Roots	33.79999, -5.37027	Healthy	Veraison
S8RKB 1 to 3	Cabernet franc	Grapevine Roots	33.79999, -5.37027	Healthy	Veraison

Supplementary Table S3. Inhibition zones diameter induced by bacterial isolates towards *A. vitis*.

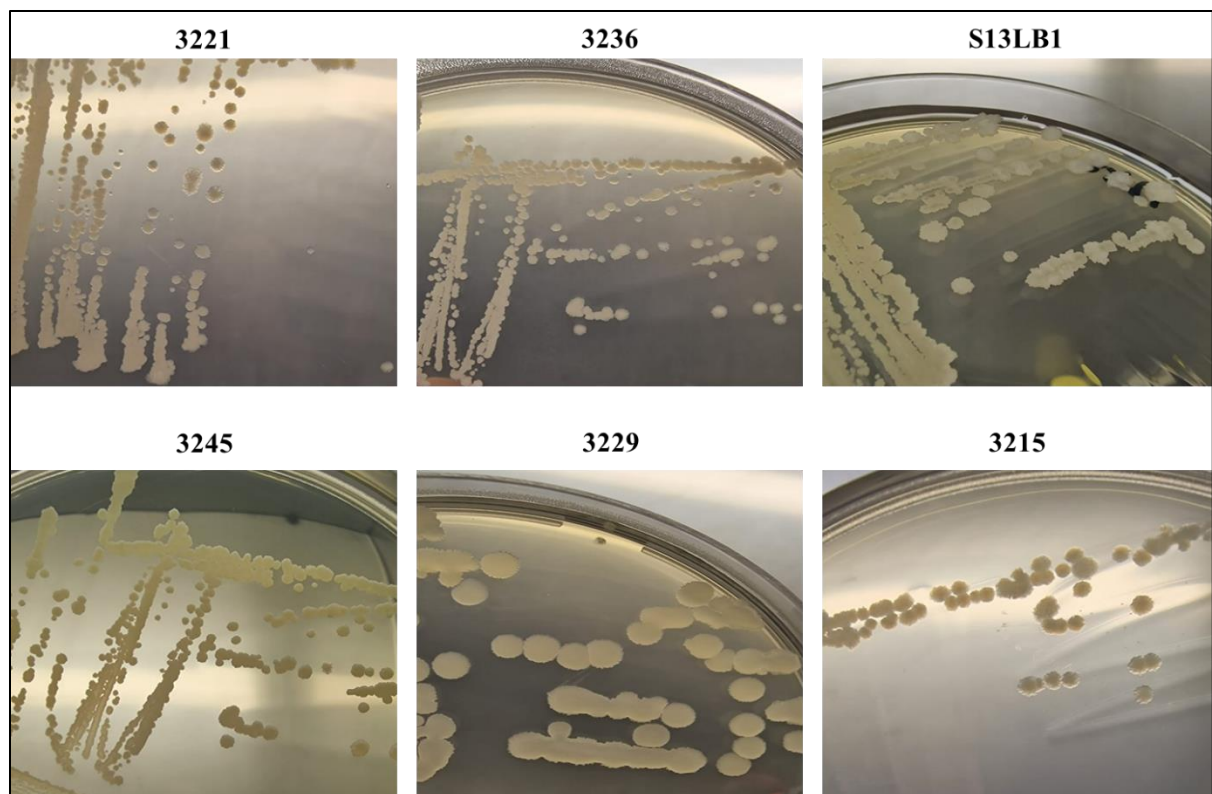
Bacterial Treatments	Control +	3221	3236	S13LB1	3215	3229	3245
Inhibition zone (mm)	20.66 ± 2.02f	31.33± 5.39b	22.83 ± 5.77d	26.66± 1.04g	20.56± 0.76a	24.66 ±5.1c	35.66 ± 1.04e

*Different letters indicate statistically significant differences by Tukey's test (p < 0.05). Data are means ± SD (n=3)

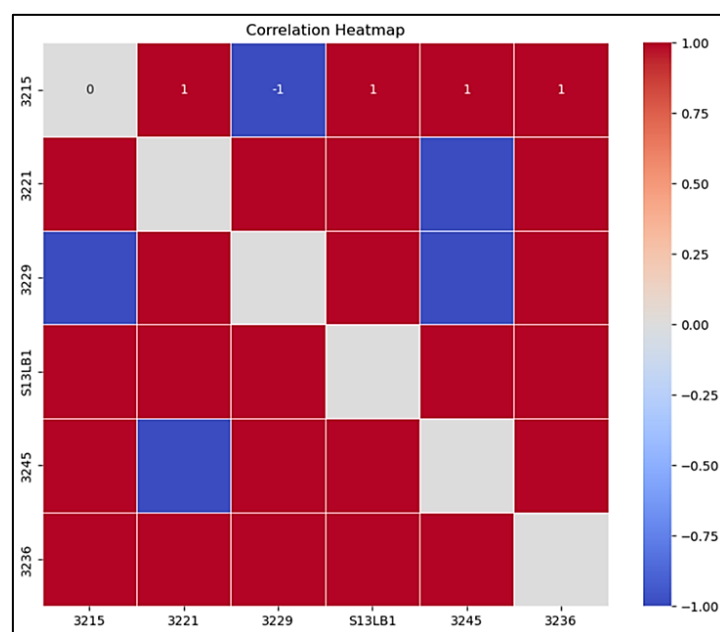
Supplementary Table S4. Inhibition zones diameter induced by microbial consortia against *A. vitis*.

Bacterial Treatment	Control +	Con1	Con2	Con3
Inhibition zone (mm)	20.66 ± 2.02a	33.66 ± 1.52d	32.66 ± 1.15c	31.33± 2.08b

* Different letters indicate statistically significant differences by Tukey's test (p < 0.05). Data are means ± SD (n=3)



Supplementary Figure S1. Colony morphology of *Bacillus* strains on YPGA culture media.



Supplementary Figure S2. Representation of the compatibility between the six antagonists. (Red) compatible; (Blue) incompatible.