

**Table S1.** Bacterial growth properties.

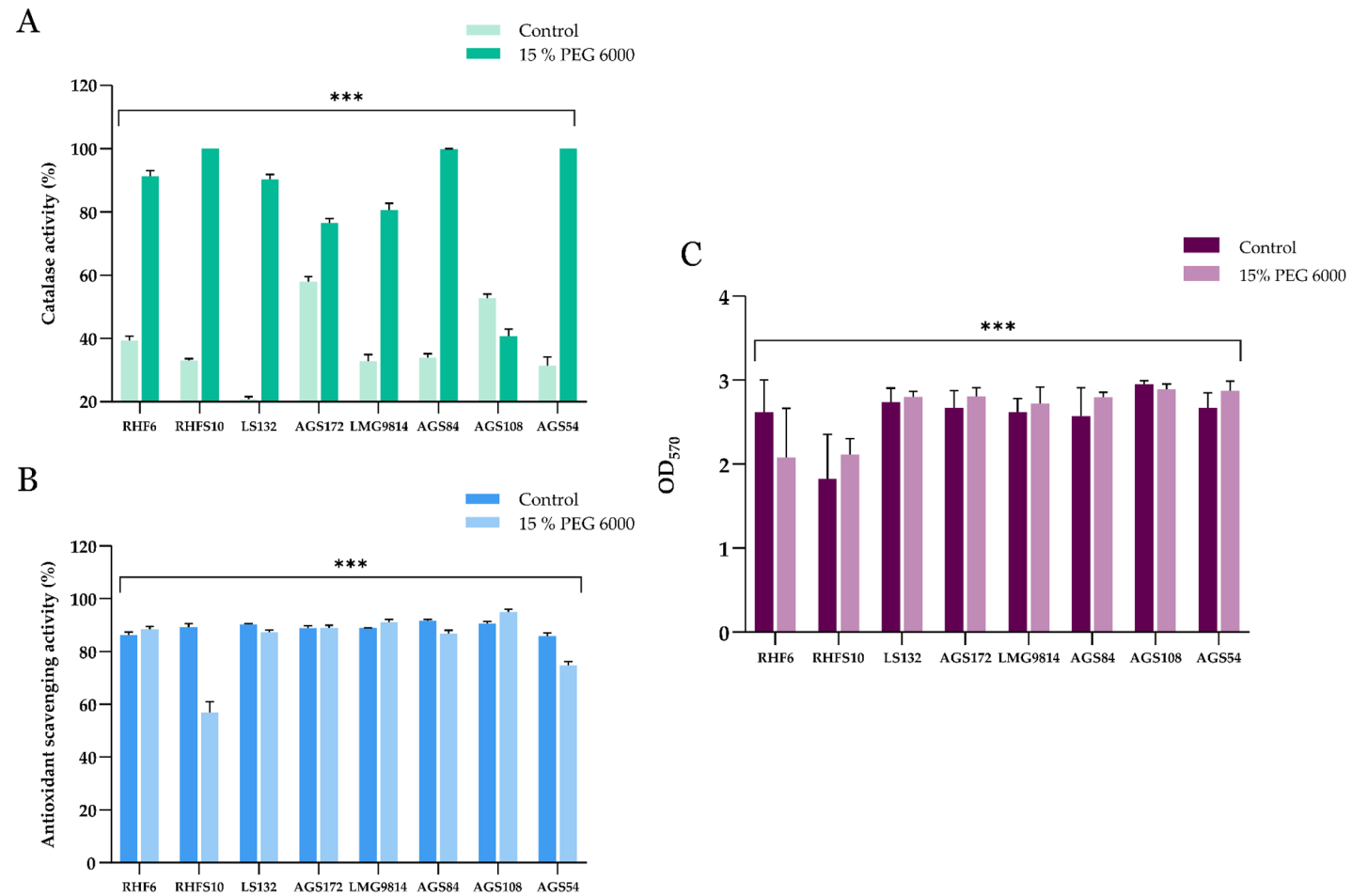
<b>Strain</b>	<b>Colony colour</b>	<b>Colony morphology</b>	<b>*Anaerobic growth</b>	<b>pH range</b>	<b>Temperature range (°C)</b>	<b>PEG6000 (%) range</b>
<b>RHF6 <sup>1</sup></b>	Creamy white	Flat	+++	4-10	15-50	0-15
<b>RHFS10 <sup>2</sup></b>	White	Undulate	++	6-12	15-50	0-15
<b>LS132</b>	Milky white	Translucent	++	2-10	25-40	0-15
<b>AGS172</b>	Creamy white	Wrinkled	++	2-10	25-50	0-20
<b>LMG9814</b>	Creamy white	Flat	++	4-10	25-60	0-15
<b>AGS84</b>	Creamy white	Flat	++	2-12	25-60	0-20
<b>AGS108</b>	Creamy white	Flat	++	2-12	25-60	0-20
<b>AGS54</b>	Creamy white	Irregular	+	4-10	4-40	0-15

\*Anaerobic growth: +:low growth; ++:moderately growth; +++:high growth

**Table S2.** Summary of plant growth-promoting and biocontrol traits exhibited by the 8 bacterial strains.

	PGP traits						HYDROLYTIC ACTIVITIES (%)			
Strain	Swarming	PVK	IAA ( $\mu\text{g/mL}$ )	Ammonia production (mg/L)	Siderophores (%)	Biosurfactants	Protease	Amylase	Xylanase	CMC
RHF6 <sup>1</sup>	+	++	$4.5 \pm 0.009$	$6.9 \pm 0.03$	7.1	+	100	100	41.7	100
RHFS10 <sup>2</sup>	+++	++	$6.5 \pm 0.01$	$9.8 \pm 0.02$	41.7	+	100	100	76.9	100
LS132	+	-	$1.4 \pm 0.02$	$12.1 \pm 0.1$	16.7	-	100	0	0	0
AGS172	+++	+	$12.9 \pm 0.08$	$5.2 \pm 0.001$	11.8	+	100	100	25	100
LMG9814	-	+	$8.6 \pm 0.013$	$2.2 \pm 0.02$	4.5	-	100	75	41.2	37.9
AGS84	+	+	$17.2 \pm 0.21$	$4.1 \pm 0.015$	7.1	-	100	20	100	100
AGS108	++	++	$5.7 \pm 0.03$	$2.5 \pm 0.1$	3.1	+	100	64.3	22.2	33.3
AGS54	-	++	$24.1 \pm 0.3$	$2.7 \pm 0.002$	47.1	+	100	4	0	47.8

No activity (-), halo or colony diameter < 5 mm (+), halo or colony diameter 10 mm (+++). Data are represented by means of at least three replicates  $\pm$  SE at  $p \leq 0.05$  using LDS. PVK, Pikovskaya; IAA, indoleacetic acid; and CMC, carboxymethylcellulose. <sup>1</sup> Available from Petrillo et al. (2021). <sup>2</sup> Available from Castaldi et al. (2021).



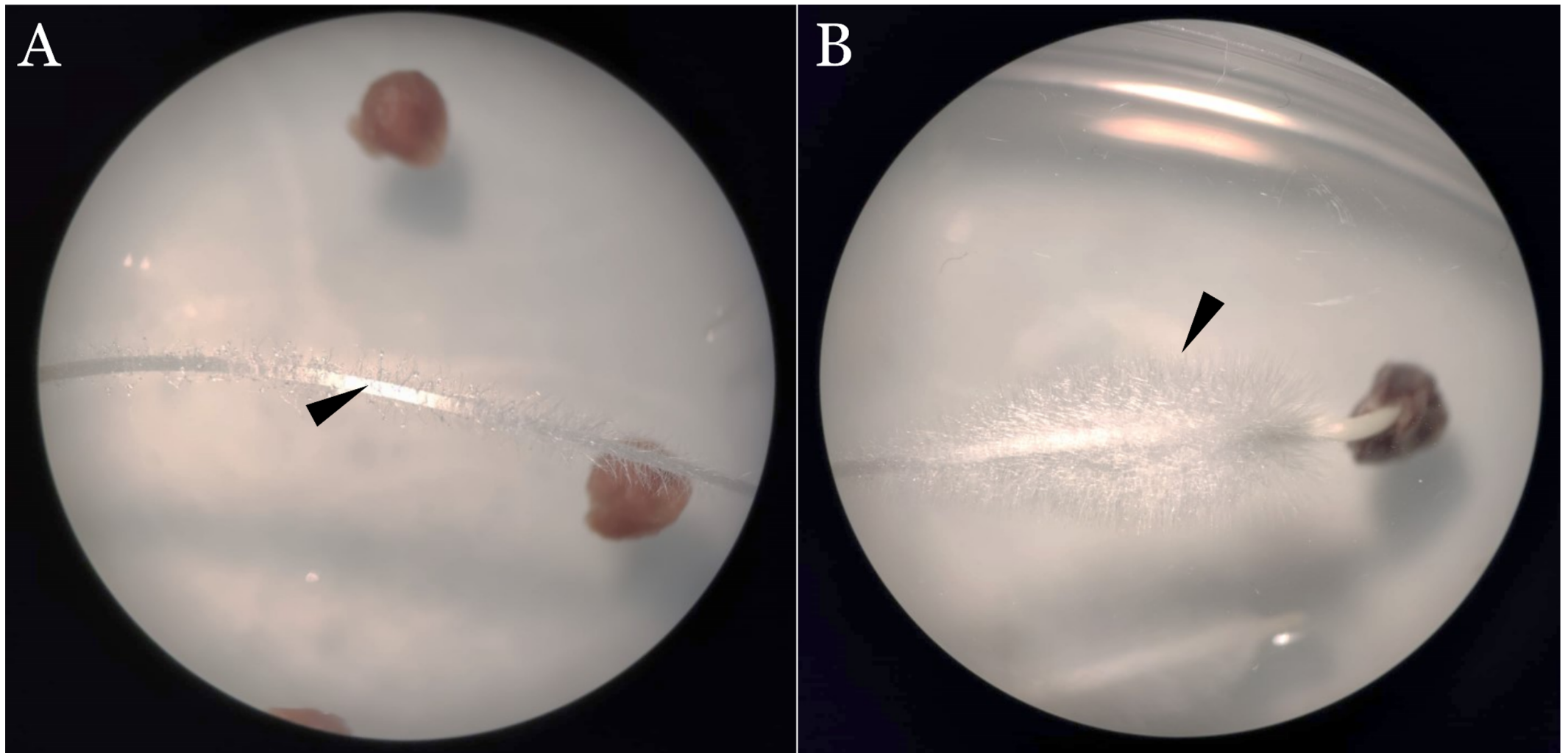
**Figure S1.** Bacterial antioxidant potential and biofilm production. Catalase activity (**a**), DPPH activity (**b**) and biofilm production shown as the absorbance of Crystal Violet registered at 570nm (**c**), assayed under either standard and drought stress (15% PEG 6000) conditions.

**Table S3.** *In vitro* bacterial compatibility.

Strain	RHF6	RHFS10	LS132	AGS172	LMG9814	AGS84	AGS108	AGS54
RHF6								
RHFS10	+							
LS132	-	+						
AGS172	+	+	+					
LMG9814	+	+	+	+				
AGS84	+	+	nc	-	+			
AGS108	+	+	+	+	+	-		
AGS54	-	+	+	nc	+	+	+	

+: compatible; -: incompatible; nc: not clear





**Figure S2.** Representative pictures of lateral radicles of seedlings' roots, acquired by stereoscopic microscope (10X magnification) during the germination assay. (a) Seedlings treated with 1X PBS (control); (b) Seedlings treated with C2. Black arrows point at lateral radicles.

**Figure S3.** Comparison of the length of representative *S. oleracea* shoots treated with 1X PBS (C-) or the bacterial consortium (C2) after 27 days of growth under standard and drought conditions.

