Table S1: Spore germination rate and appressorium formation rate of *Beauveria bassiana* in different concentrations of epidermal compound analogue

Subtance	Concentration (mg/mL)	Germination rate at 12 h (%)	Germination rate at 24 h (%)	Appressorium differentiation rate at 24 h (%)	Germination rate at 36 h (%)	Appressorium differentiation rate at 36 h (%)	Germination rate at 48 h (%)	Appressorium differentiation rate at 48 h (%)	Germination rate at 72 h (%)	Appressorium differentiation rate at 72 h (%)
Carnitine C3:0	0.05	9.00±1.58 b	30.60±3.71 c	13.40±2.70 a	39.00±2.00 c	24.40±1.14 a	56.60±2.79 c	29.80±1.48 c	80.40±1.34 ab	37.00±1.87 cd
	0.1	13.60±2.19 a	40.80±1.92 a	13.80±2.17 a	56.80±3.27 a	27.80±2.28 a	65.00±2.45 a	44.80±3.42 a	82.20±1.30 a	47.00±1.87 a
	0.25	8.80±1.48 b	34.80±2.77 b	9.80±3.11 b	44.60±2.19 b	25.00±1.22 ab	59.00±1.58 bc	35.00±2.55 b	78.80±1.48 b	39.20±1.92 bc
	0.5	4.00±1.00 c	25.60±3.43 d	4.60±1.52 d	35.20±1.92 d	25.00±3.81 ab	52.40±2.07 d	32.40±1.34 bc	75.00±2.34 c	36.40±1.67 cd
	1	2.00±1.58 c	24.20±1.79 d	5.80±3.03 cd	34.60±1.82 d	17.40±2.61 c	49.20±2.59 e	32.80±1.92 b	71.20±1.48 d	35.20±3.90 d
	CK	3.60±0.89 c	22.40±1.82 d	8.40±0.55 bc	40.20±1.64 c	24.80±1.48 ab	60.20±1.79 b	34.60±0.55 b	71.20±1.92 d	40.40±1.14 b
DOPC	0.01	3.80±2.49 a	17.40±1.14 bc	6.60±0.89 ab	41.80±3.77 ab	23.60±3.65 ab	61.20±6.60 a	34.00±3.32 b	76.20±4.60 ab	42.00±2.45 ab
	0.05	1.80±1.92 a	16.00±3.61 cd	8.40±2.19 a	41.20±2.77 b	22.40±3.29 b	60.60±6.50 a	35.40±4.67 ab	68.80±5.40 c	39.40±2.79 b
	0.1	1.60±0.89 a	13.60±1.82 d	5.40±0.89 b	39.80±4.32 b	22.00±3.16 b	61.20±3.27 a	38.40±1.67 ab	66.4±4.34 c	38.40±1.67 b
	0.5	1.80±1.64 a	13.40±2.61 d	5.60±1.52 b	40.4±2.41 b	23.80±1.79 ab	61.00±3.32 a	36.40±3.85 ab	66.80±3.90 c	37.60±4.88 b

DOPC	1	3.40±1.82 a	20.20±2.77 ab	5.20±1.92 b	46.20±5.22 a	26.60±3.36 a	61.00±2.55 a	38.80±3.11 ab	78.20±2.39 a	45.00±3.87 a
	CK	3.60±0.89 a	22.40±1.82 a	8.40±0.55 a	40.20±1.64 b	24.80±1.48 ab	60.20±1.79 a	34.60±0.55 a	71.20±1.92 bc	40.40±1.14 b
Glycylmethionine	0.05	3.40±1.14 a	20.00±1.58 c	7.40±1.82 a	40.20±1.92 a	25.00±2.92 a	60.80±3.11 a	34.00±2.92 b	70.80± 1.64a	43.20±2.68 a
	0.1	4.00±1.87 a	18.60±2.07 c	8.00±3.39 c	38.40±1.82 a	27.60±1.82 a	59.40±2.41 a	33.60±2.61 b	70.00±1.41 a	41.40±1.95 a
	0.25	3.40±0.89 a	20.80±2.49 bc	10.20±1.30 bc	40.80±2.17 a	28.60±2.41 a	61.20±3.63 a	38.60±3.51 a	71.00±3.67 a	42.60±2.61 a
	0.5	2.80±1.64 a	24.60±3.78 b	9.40±2.07 b	40.00±2.00 a	26.20±3.70 a	61.20±3.03 a	34.40±1.67 b	73.00±3.08 a	40.20±2.77 a
	1	4.40±1.14 a	29.00±4.74 a	7.80±2.77 a	40.40±4.77 a	15.40±3.44 b	58.80±4.32 a	31.80±3.19 b	72.00±6.40 a	35.80±4.82 b
	CK	3.60±0.89 a	22.40±1.82 bc	8.40±0.55 a	40.20±1.64 a	24.80±1.48 a	60.20±1.79 a	34.60±0.55 b	71.20±1.92 a	40.40±1.14 a
TPP	0.05	8.80±1.30 b	36.20±1.92 a	12.60±2.70 a	49.00±2.24 b	24.00±1.73 a	59.40±2.88 b	34.60±2.61 b	76.80±1.30 b	40.00±1.58 b
	0.1	10.60±3.21 ab	31.20±3.70 b	13.80±4.60 a	54.80±2.17 a	25.40±2.07 a	65.40±2.30 a	40.20±2.77 a	81.20±1.92 a	44.80±3.96 a
	0.25	12.40±1.95 a	38.80±3.56 a	14.80±1.92 a	49.80±2.68 b	25.40±5.73 a	59.40±2.88 b	32.40±3.21 bc	76.80±1.30 b	40.60±3.13 b
	0.5	11.20±2.17 ab	36.80±6.18 a	13.00±2.92 a	51.60±1.14 b	21.80±3.11 a	59.00±1.87 b	29.80±3.42 c	76.80±1.79 b	42.80±2.86 ab
	1	3.40±0.55 c	10.40±1.67 d	1.80±0.45 c	20.00±2.74 d	5.60±1.52 b	47.20±2.59 c	23.20±3.90 d	56.60±4.62 d	34.60±4.04 c
	CK	3.60±0.89 c	22.40±1.82 c	8.40±0.55 b	40.20±1.64 c	24.80±1.48 a	60.20±1.79 b	34.60±0.55 b	71.20±1.92 c	40.40±1.14 b
Enilconazole	1×10^{-5}	1.80±0.84 b	17.40±2.30 b	4.20±1.48 b	44.20±2.34 a	23.20±2.28 b	51.60±3.58 b	31.80±2.77 b	69.80±3.56 a	42.60±3.05 a
	1×10^{-4}	ND	13.80±2.28 c	2.20±0.84 c	28.60±5.46 c	18.80±4.44 c	45.00±4.00 c	22.40±1.95 c	62.20±3.42 b	38.40±6.91 a

Enilconazole	1×10^{-3}	ND	1.60±1.52 d	ND	6.20±1.48 d	ND	17.20±2.38 d	2.00±0.71 d	31.00±3.67 c	9.20±2.39 b
	1×10^{-2}	ND	ND	ND	ND	ND	2.20±1.64 e	ND	3.40±1.14 d	ND
	1×10^{-1}	ND	ND	ND	ND	ND	ND	ND	ND	ND
	CK	3.60±0.89 a	22.40±1.82 a	8.40±0.55 a	40.20±1.64 b	24.80±1.48 a	60.20±1.79 a	34.60±0.55 a	71.20±1.92 a	40.40±1.14 a
DSBA	1×10^{-4}	2.60±0.55 b	19.00±1.22 b	3.00±0.71 b	34.80±1.48 b	25.60±2.70 a	55.60±2.70 b	32.201.30 c	75.00±2.83 a	38.00±3.39 b
	1×10^{-3}	5.80±2.49 a	22.20±2.28 a	0.60±0.89 c	41.20±2.77 a	17.20±3.70 b	52.80±2.59 b	41.00±2.00 a	70.40±3.05 b	46.20±3.03 a
	1×10^{-2}	0.60±0.89 c	8.40±2.30 c	ND	17.80±2.39 c	6.80±1.30 c	35.80±3.42 c	13.60±2.70 d	48.00±3.46 c	28.80±1.79 c
	1×10^{-1}	ND	4.80±2.59 d	ND	10.80±3.96 d	ND	21.20±3.03 d	2.60±1.14 e	28.40±2.97 d	11.40±2.41 d
	1	ND	ND	ND	1.00±1.00 e	ND	9.20±2.59 e	ND	15.60±1.82 e	6.00±1.58 e
	CK	3.60±0.89 b	22.40±1.82 a	8.40±0.55 a	40.20±1.64 a	24.80±1.48 a	60.20±1.79 a	34.60±0.55 b	71.20±1.92 b	40.40±1.14 b

Note: Data in the table represent mean ± standard deviation. Different lowercase letters within the same column indicate statistically significant differences ($p \leq 0.05$) in germination rates between treatments at the same germination time, while identical lowercase letters denote non-significant differences ($p > 0.05$). 'ND ' means not detected.