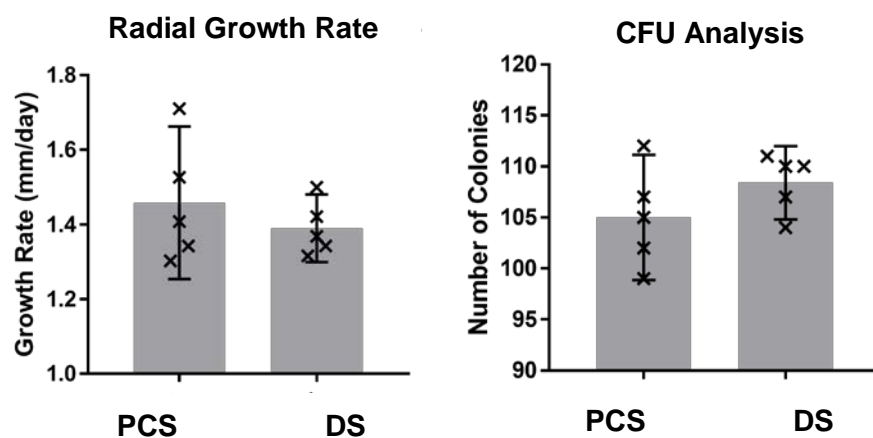
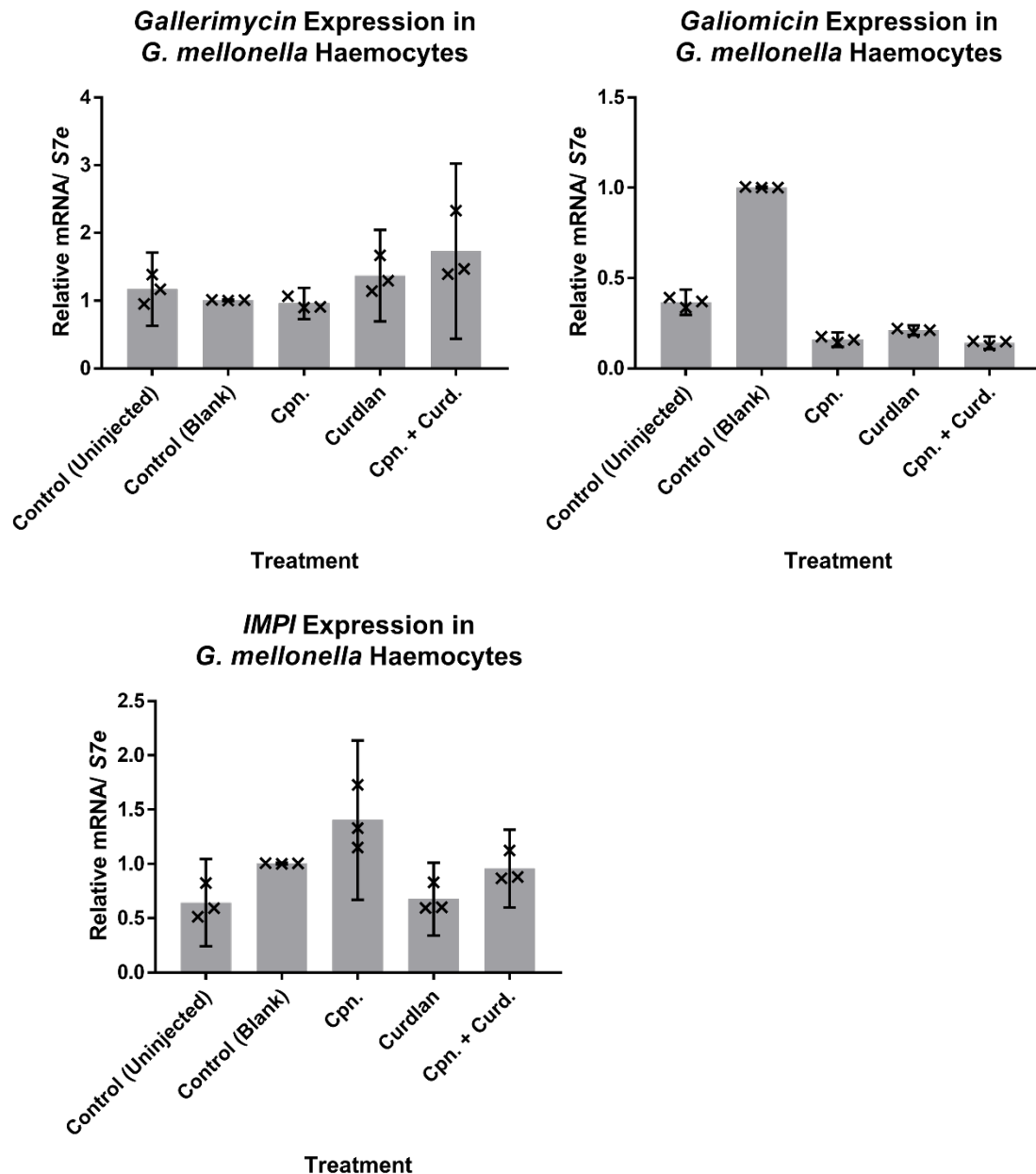


SUPPLEMENTARY FIGURES

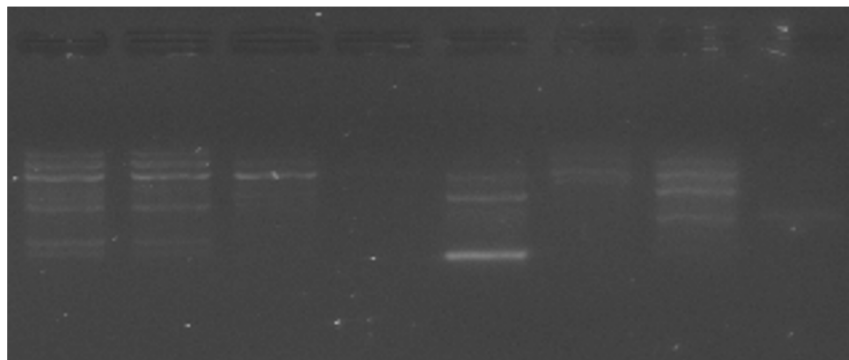


Supplementary Figure S1: Growth rates of *CM2* parental control (PCS) and degenerated (DS) strains on PDA plates. Left: radial growth rate after 20 days from subculture; right: colony forming unit analysis. Error bars show 95% confidence intervals of means, from five biological replicates.

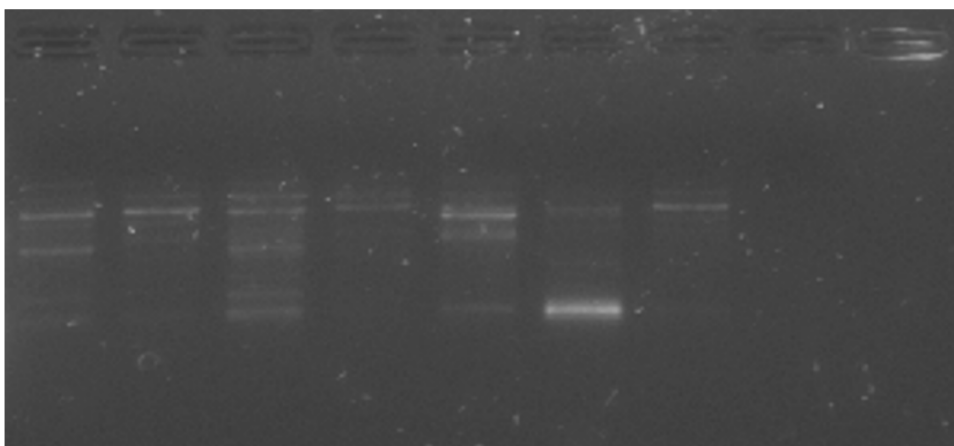


Supplementary Figure S2: *Gallerimycin*, *Galiomicin*, and *IMPI* expression in *Galleria mellonella* haemocytes following injection by curdlan (curd.), with treatments of additional cordycepin (cpn.) and pentostatin (ptn.). Three biological replicates, with each point an average of three technical replicates. In all cases, according to t-tests with Bonferroni corrections, there was no significant stimulation by curdlan compared to the negative controls (uninjected and blank).

CM2	CM2			TBRC			ARSEF
Control	Degen.	CM16	CM17	5457	SR2	SR3	11703



	CBS	KCTC	BCRC	NBRC	TBRC		TBRC	Neg.
UKMS	128.25	6064	32219	9787	5106	CM18	6804	Control

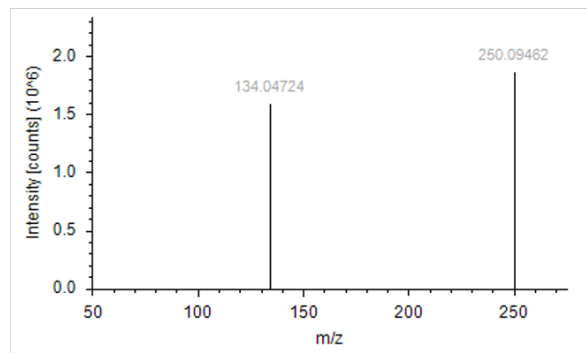
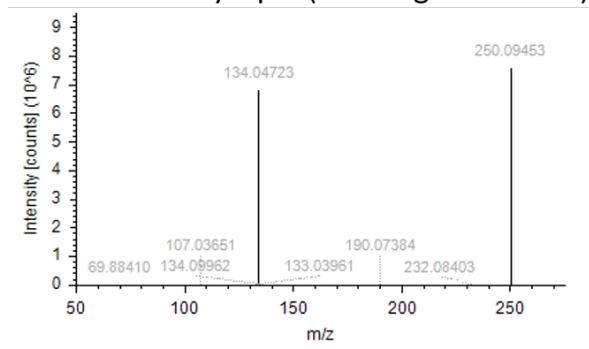


RAPD S62

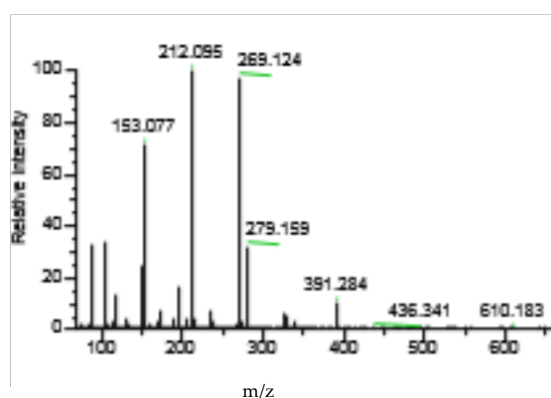
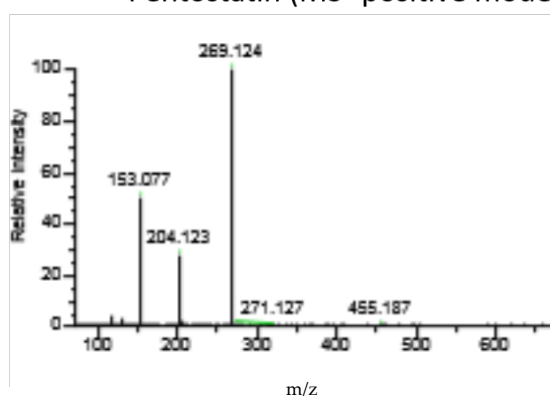
Supplementary Figure S3: RAPDs PCR screens of various *Cordyceps militaris* strains and isolates using the *RAPD S62* primers.

LC-MS(/MS): Fragmentation Spectra of Cordycepin and Pentostatin **QC SAMPLES** **STANDARD**

Cordycepin (MS² negative mode)



Pentostatin (MS¹ positive mode)



Supplementary Figure S4: Fragmentation mass spectra of cordycepin and pentostatin, using tandem MS (MS/MS) and standard MS respectively. Metabolomics Standards Initiative level 1 identification of these metabolites is confirmed by comparison of these spectra for the *C. militaris* QC samples with those of the standards used for quantification.