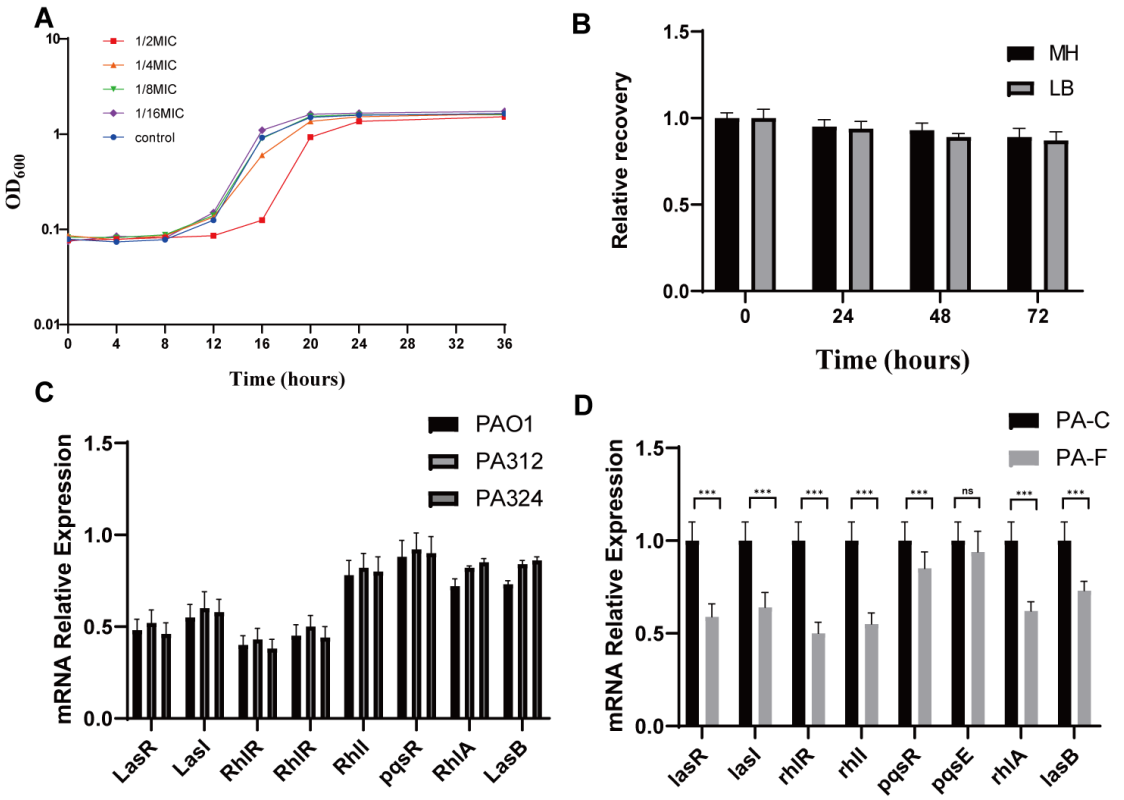

Fig. S1A. Growth curve verification of the sub-inhibitory concentration for MDR-PA312. Growth of the clinical MDR-PA312 strain in Mueller-Hinton broth with or without FOM at 1/8 MIC (0.25 µg/mL) was monitored by measuring OD600 over 36 hours. Data are presented as mean ± SD (n=3 independent cultures). The growth curve of PA312 overlapped with that of the untreated control, confirming that 1/8 MIC FOM does not inhibit the growth of this clinical strain and is suitable for subsequent sub-MIC experiments. Fig. S1B. Stability of FOM in culture media over time. FOM was incubated at 0.25 µg/mL in sterile Mueller-Hinton (MH) and Luria-Bertani (LB) broths at 35°C. The concentration of FOM was quantified by HPLC-UV at the indicated time points. Data points represent mean ± SD (n=3). The FOM concentration remained stable throughout the 72-hour period, confirming its integrity under our experimental biofilm assay conditions. Fig. S1C. Azithromycin positive control validates the quorum sensing inhibition assay. Relative expression of QS genes in PAO1 and MDR isolates (PA312, PA324) after 20-hour exposure to azithromycin (AZM, 2 µg/mL) versus a vehicle control (set to 1.00). Data are presented as mean ± SD (n=3 biological replicates). AZM, a known QS inhibitor, specifically and strongly downregulated the Las and Rhl system genes, with more modest effects on the Pqs system, thereby corroborating the

direction and specificity of the transcriptional changes observed with FOM. Fig. S1D. Lung-derived bacterial qRT-PCR under sub-MIC FOM shows attenuation of AHL-tier transcripts (las/rhl) with limited/strain-dependent effects on Pqs transcripts. Data are presented as $2^{-\Delta\Delta Ct}$ normalized to the strain-matched vehicle (PA-C = 1.00); mean ± SD.