

**SUPPLEMENTARY DATA**

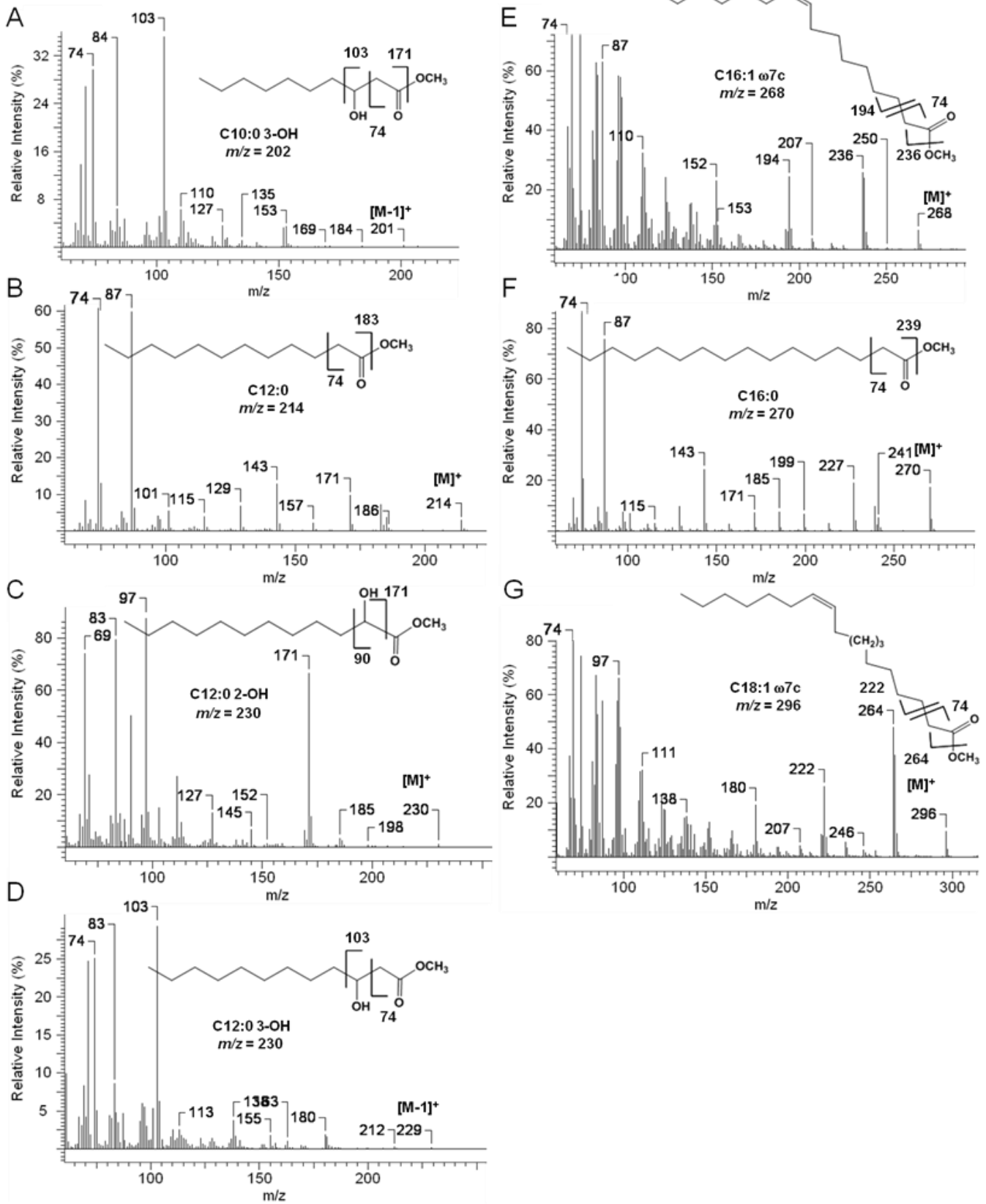
**for**

*Pseudomonas aeruginosa* directly shunts  $\beta$ -oxidation degradation intermediates into *de novo*  
fatty acid biosynthesis

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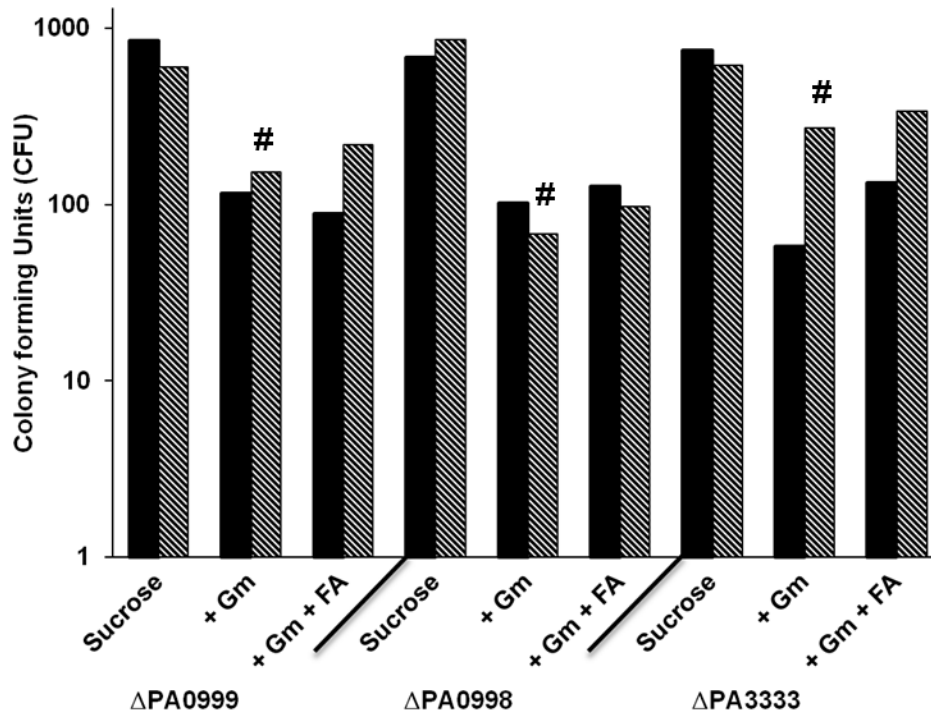
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### Supplementary Figure 1



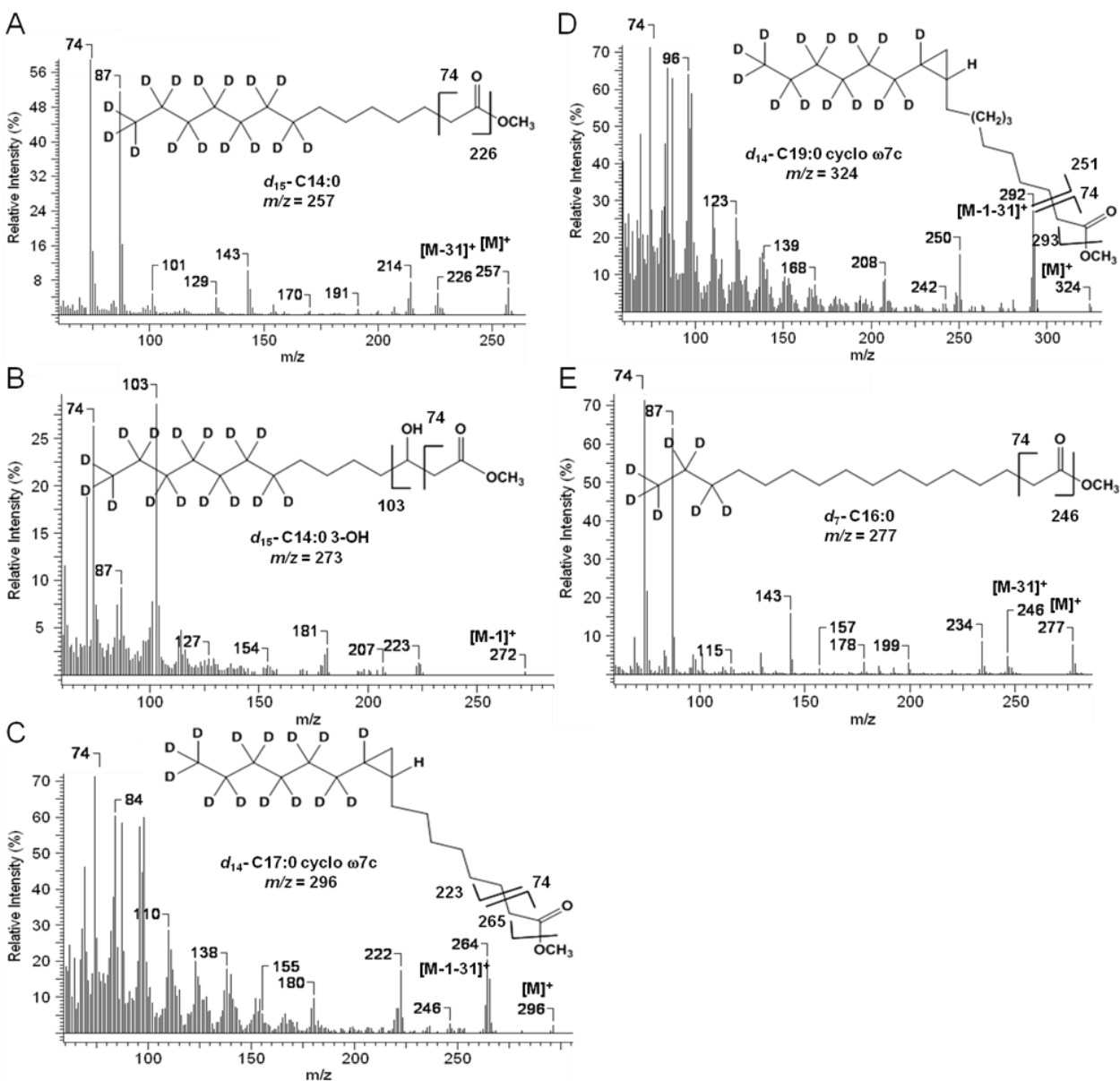
**Supplementary Figure 1:** Mass spectra of FAMES with natural isotope abundance isolated from *P. aeruginosa* strains. Parent molecular ions ( $[M]^+$ ) and select fragment ions are indicated. The gas chromatogram and corresponding mass spectra of FAMES with the terminal 7 carbons uniformly deuterated are included in the main text (Fig. 2).

Supplementary Figure 2



**Supplementary Figure 2:** Synthetic lethal analysis for *fabY* with KASIII domain orthologs. The pTMT123 (*fabH*, solid bars) or pTMT124 ( $\Delta$ *fabY*, hatched bars) vectors were individually introduced into *P. aeruginosa*  $\Delta$ PA0999,  $\Delta$ PA0998, and  $\Delta$ PA3333. Colony forming units (CFU) were determined after resolving the vector by sucrose counterselection as described in the Materials and Methods section. CFU were recorded after 24 hr or 48 hr (#) of incubation at 37 °C. Selection media and strain background is denoted on the X-axis and data shown is representative of 3 separate experiments.

### Supplementary Figure 3



**Supplementary Figure 3:** Mass spectra of deuterated FAMES unique to *E. coli* expressing PA3286. FAMES were prepared from the *E. coli* strain TMT47 [(*fabH*::*camR* (pET-PA3286))] grown on LB agar containing 100  $\mu$ g/mL of perdeuterated decanoate ( $d_{19}$ -C10:0; 100  $\mu$ g/mL) and 10  $\mu$ g/mL of palmitate. Parent molecular ions ( $[M]^+$ ) and select fragment ions are indicated.