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Insights on sulfamethoxazole bio-transformation by environmental *Proteobacteria* isolates

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Declarations of interest: none

Graphical Abstract

HIGHLIGHTS• Fresh-water *Proteobacteria* can transform up to 81% of SMX via co-metabolism.

- SMX was stoichiometrically transformed into N^4 -acetyl-sulfamethoxazole.
- For *Pseudomonas mandelii*, SMX transformation rate and extent rely on the cell load.
- Maximal SMX transformation rates achieved at the declining of the growth phase.
- The presence of *nat* gene suggests involvement of an arylamine *N*-acetyltransferase.

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