

***In vitro* Synergy between Sodium Deoxycholate and Furazolidone against Enterobacteria**

Vuong Van Hung Le^a, Catrina Olivera^a, Julian Spagnuolo^{a1}, Ieuan Davies^b and Jasna Rakonjac^{a*}

^aSchool of Fundamental Sciences, Massey University, Palmerston North, New Zealand

^bNew Zealand Pharmaceuticals Ltd., Palmerston North, New Zealand

¹**Present address:** Department of Biomedicine, University Hospital Basel, 4031 Basel, Switzerland

***Corresponding author:** Jasna Rakonjac, School of Fundamental Sciences, Massey University, Palmerston North, New Zealand

The Content of Supplementary Data:

- **Figure S1:** Structural formulae of nitrofurans and sodium deoxycholate
- **Figure S2:** FZ interaction with DOC in growth inhibition of *E. coli* strain O157 (A) and canine uropathogenic *E. coli* P50 (B)
- **Figure S3:** Interactions of three nitrofurans (NIT, NFZ and CM4) with DOC in growth inhibition of *Citrobacter gillenii* PMR001
- **Figure S4:** Interactions of three nitrofurans (NIT, NFZ and CM4) with DOC in growth inhibition of *Salmonella enterica* sv. Typhimurium LT2
- **Figure S5:** Interactions of two nitrofurans (NIT and NFZ) with DOC in growth inhibition of *Klebsiella pneumoniae* PMR001

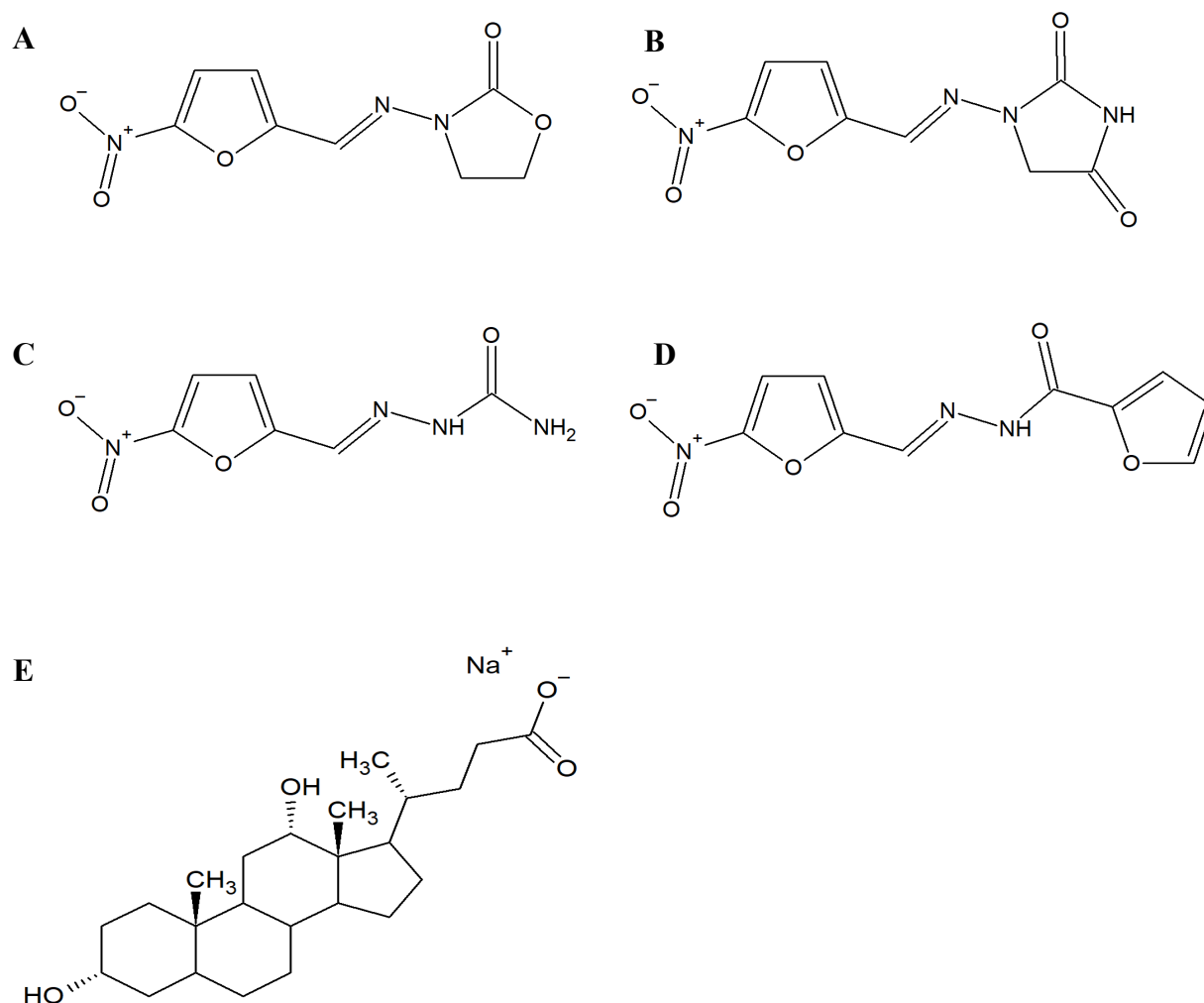


Figure S1: Structural formulae of nitrofurans and sodium deoxycholate (E). A) Furazolidone (FZ); B) Nitrofurantoin (NIT); C) Nitrofurazone (NFZ). D) CM4, Pubchem ID AC1LGLMG (no CAS number). Chemical name: N'-[(5-nitrofuran-2-yl)methylidene]furan-2-carbohydrazide or N-[(5-nitrofuran-2-yl)methylideneamino]furan-2-carboxamide.

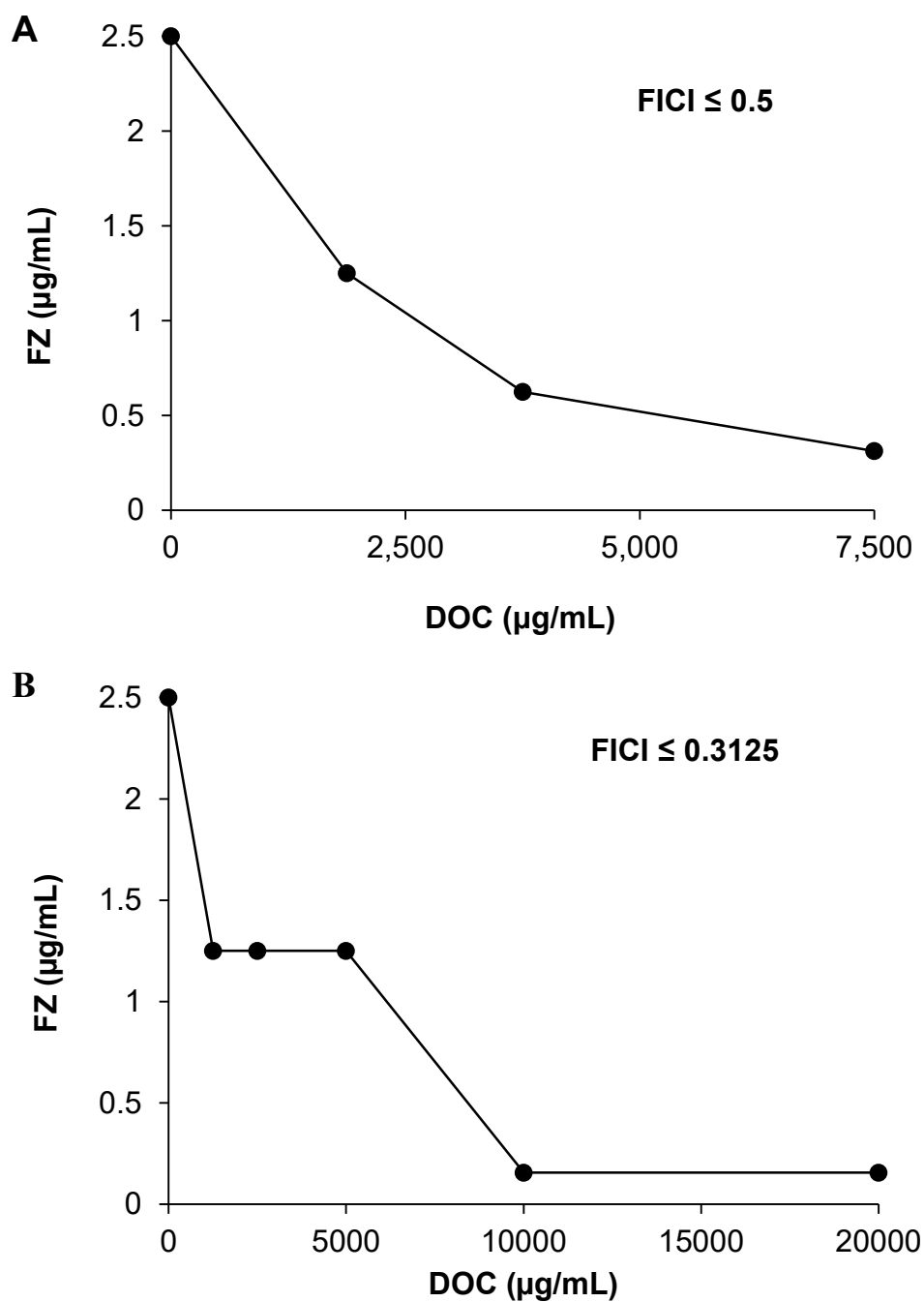


Figure S2: FZ interaction with DOC in growth inhibition of *E. coli* strain O157 (A) and canine uropathogenic *E. coli* P50 (B). Graphs (isobolograms) are obtained using a checkerboard analysis at multiple concentration of molecules. Each data point represents the minimum molecule concentrations alone or in combination causing 90% inhibition to bacterial growth.

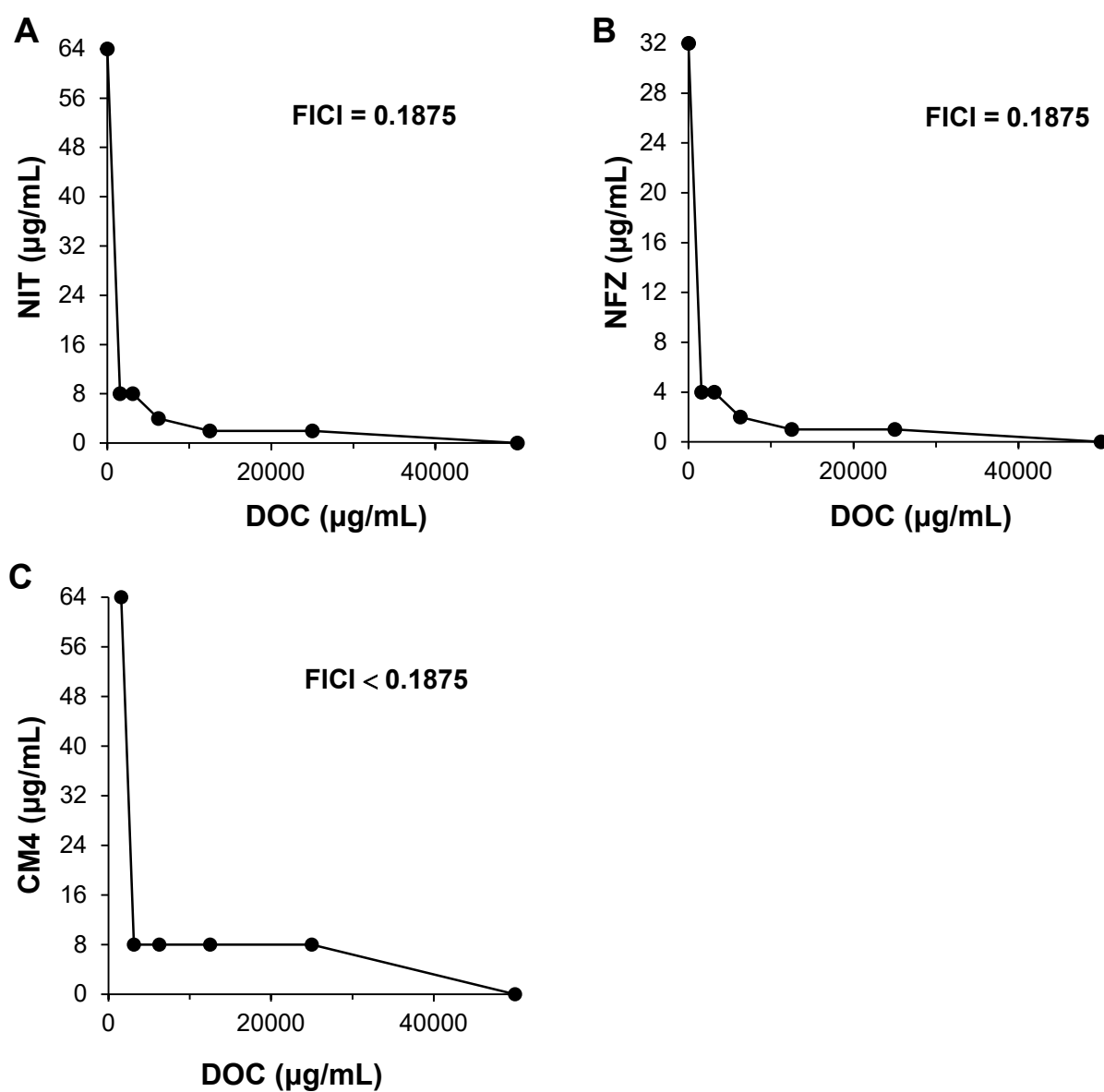


Figure S3: Interactions of three nitrofurans (NIT, NFZ and CM4) with DOC in growth inhibition of *Citrobacter gillenii* PMR001. Graphs (isobolograms) are obtained using a checkerboard analysis at multiple concentration of molecules. Each data point represents the minimum molecule concentrations alone or in combination causing 90% inhibition to bacterial growth.

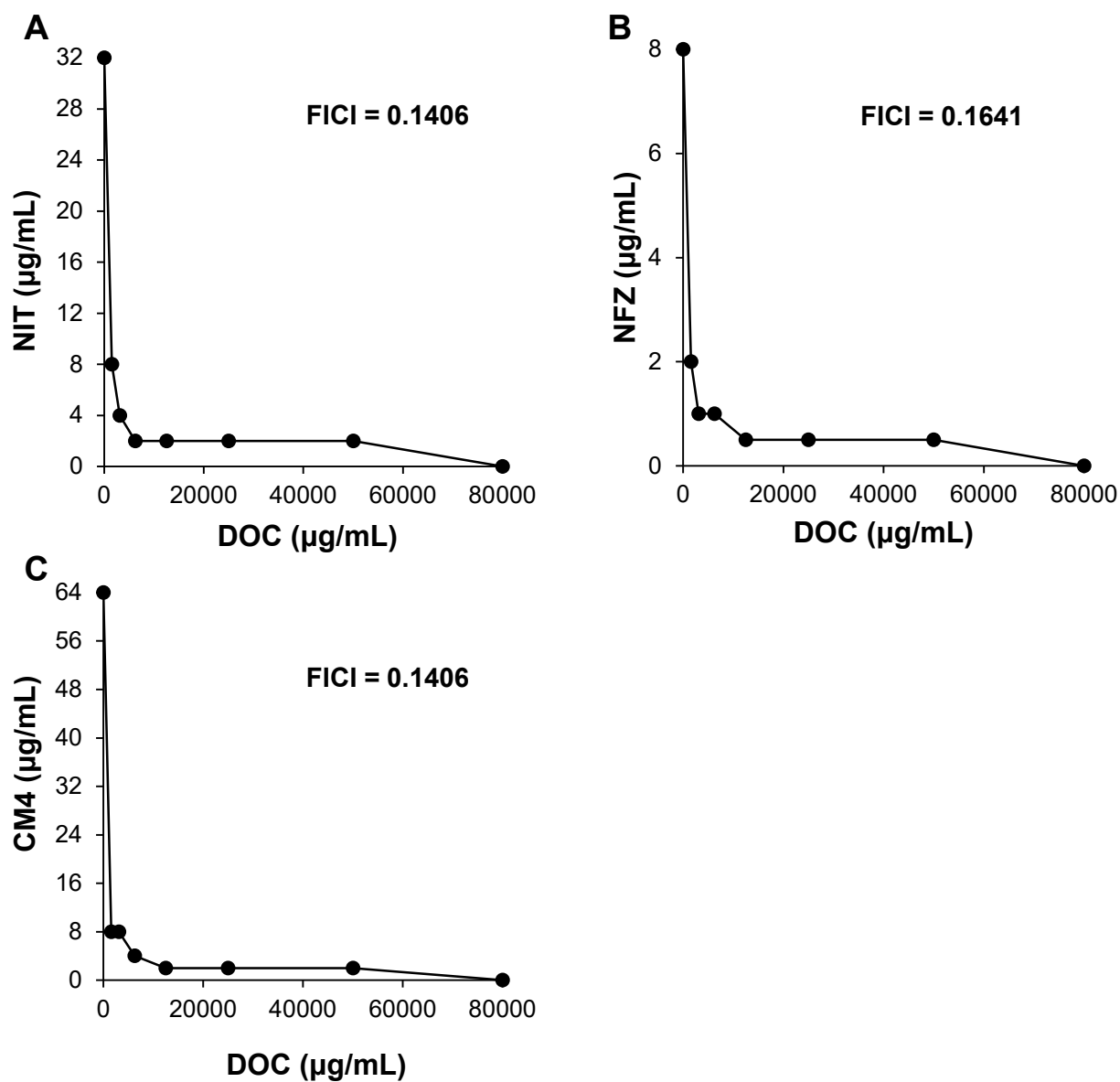


Figure S4: Interactions of three nitrofurans (NIT, NFZ and CM4) with DOC in growth inhibition of *Salmonella enterica* sv. Typhimurium LT2. Graphs (isobolograms) are obtained using a checkerboard analysis at multiple concentration of molecules. Each data point represents the minimum molecule concentrations alone or in combination causing 90% inhibition to bacterial growth.

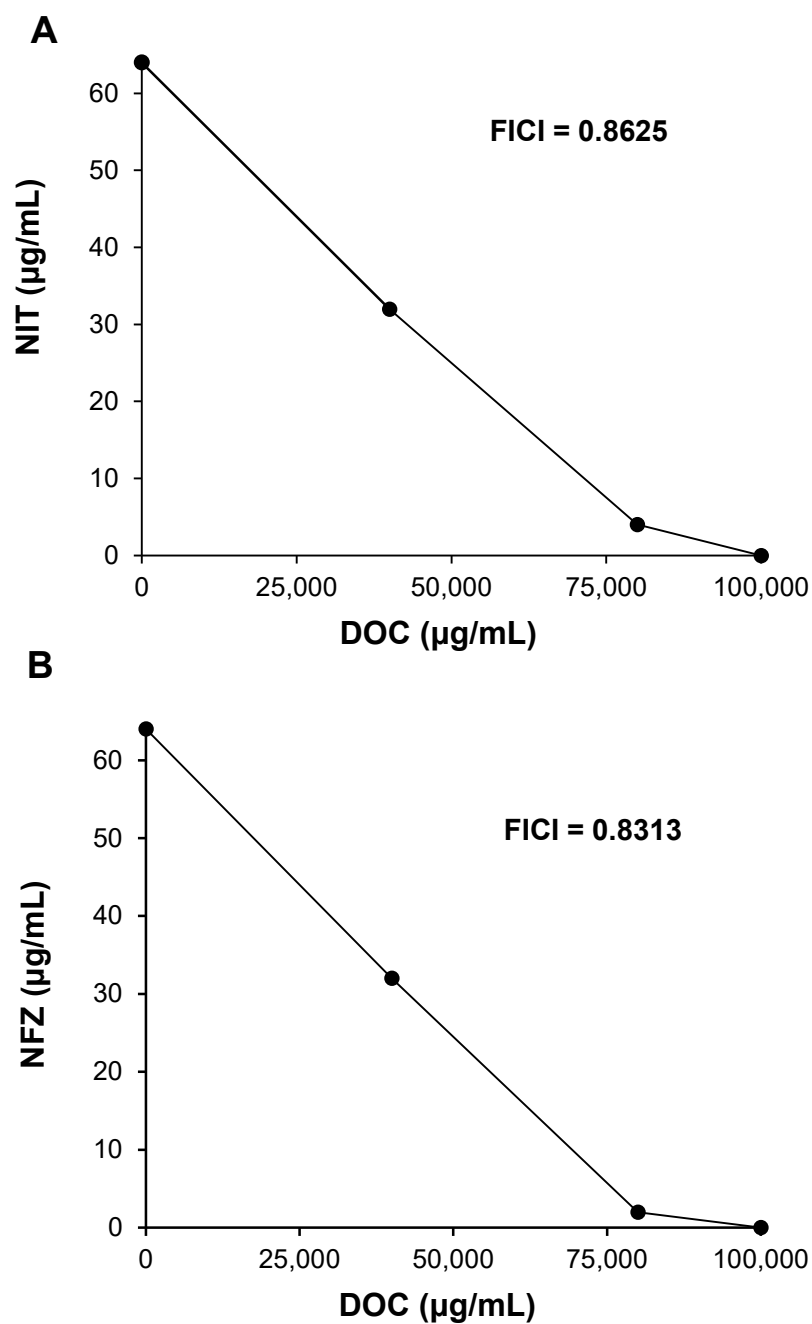


Figure S5: Interactions of two nitrofurans (NIT and NFZ) with DOC in growth inhibition of *Klebsiella pneumoniae* PMR001. Graphs (isobolograms) are obtained using a checkerboard analysis at multiple concentration of molecules. Each data point represents the minimum molecule concentrations alone or in combination causing 90% inhibition to bacterial growth.