



**Additional File 7. Phylogeny of a *xoxF2* sequence retrieved from soil.**

Phylogenetic tree of a cloned *xoxF2* sequence retrieved by PCR from DNA extracted from unplanted soil as revealed by sequencing. Cloned PCR product is designated “CF”. Reference gene sequences were selected from the NCBI nucleotide database. Only bootstrap values  $\geq 50\%$  (based on 500 replicates) are labelled at branch points. Alignments were produced at the amino acid level with the Muscle algorithm and phylogenetic trees were produced in Mega7 [70] with nucleotide sequence data using the neighbour-joining method. Multiple *xoxF* gene copies in reference strains are numbered in parentheses. There were a total of 198 amino acid residues in the final dataset.