

An oil-degrading bacterium identified as *Acinetobacter lwoffii* was isolated by elective culture on North Sea Forties crude oil from an activated sludge sample. It grew on a wide range of n-alkanes (C₁₂ – C₂₈) and 1-phenylalkanes, including 1-phenyldodecane, 1-phenyltridecane and 1-phenyltetradecane. The organism degraded 1-phenyldodecane to phenylacetic acid which was further metabolized via homogentisic acid, whilst 1-phenyltridecane was transformed to trans-cinnamic and 3-phenylpropionic acid which were not further metabolized. Evidence is presented for a relationship between aromatic amino acid catabolism and 1-phenyldodecane degradation in this organism.