

Developing thermostable biocatalysts for partial oxidation of oil molecules

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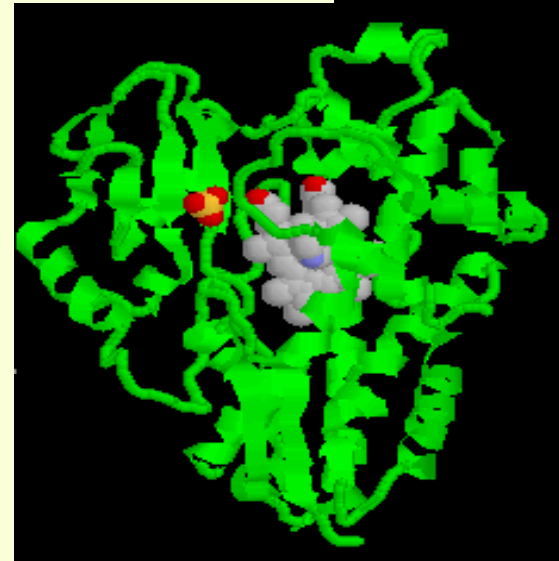
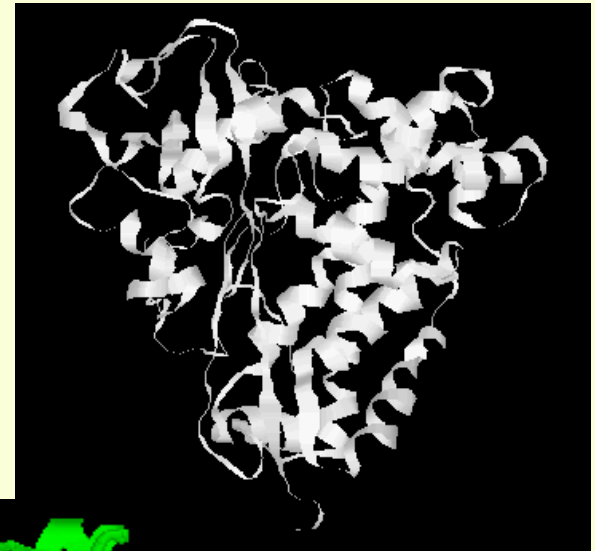
Biochemical Engineering Research Group, Life Sciences Division

- **Project collaborators:**
ChevronTexaco
- **Sponsor: DOE FE, NPTO**

Highlights:

- **Designed chimera's by combining mesophilic cytochrome P450 (with desired function) with thermostable P450.**
- **Demonstrated thermostability in a hybrid P450 enzyme**
- **Increased enzyme yields (to >40 mg/L) by cloning into pCWori vector and E. coli strain BL21.**

Hybrid P450
(Structure obtained using PROSPECT)



Thermophilic
P450 – CYP119
With ligands

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