

Developing improved biocatalysts for sulfur removal from petroleum feedstocks

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- **Project collaborators:**
ChevronTexaco, ExxonMobil, UTK
- **Sponsor:** DOE OIT, Industries of the Future

Highlights:

- Conducted screening of desulfurization enzyme mutants generated by laboratory evolution. Isolated enzyme mutants showing doubling of carbon-sulfur bond breakage activity.
- Transferred the desulfurization gene to a *Rhodococcus-E. coli* shuttle vector
- Initiated oil experiments to study synergistic biocracking-biodesulfurization for improving sulfur removal.

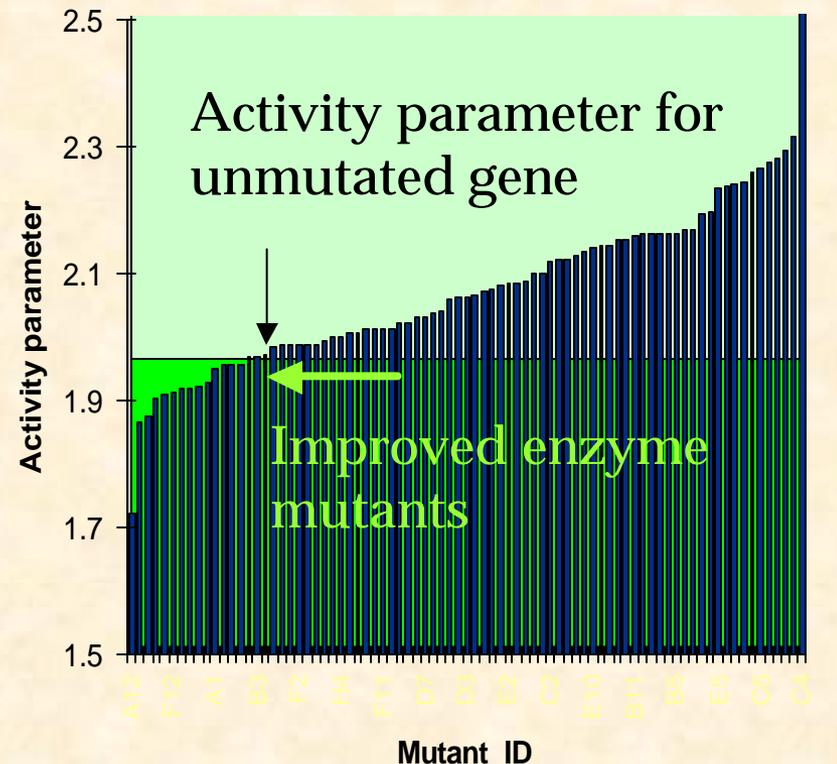


Plate 6 screen (96 mutants shown)