

Script file 1: Competition between Two Different P450 Enzymes for the Reductase  
- This is the script file that was used with the Dynafit program to model the experimental data in Figures 5 and 6. The mathematical model assumes that CYP2E1 and CYP1A2 (or CYP2B4 and CYP2E1) exist as functional monomers that compete for NADPH-cytochrome P450 reductase.

```
; Two P450s
; Interaction fit program
; Reversible reductase binding with 2 different P450s where the P450 do not
interact with each other
```

```
[task]
    data = velocities
    task = fit
    model = michaelis menten
```

```
[mechanism]

    A + R <===> A.R      : Kar      dissoc.
    A.R --> P + A.R      : kj
    B + R <===> B.R      : Kbr      dissoc.
    B.R --> P + B.R      : kp
```

```
[constants]

    Kar = 0.01
    Kbr = 0.0015
    kj = 31
    kp = 47.7
```

```
[concentrations]
```

```
[responses]

    P = 7.5
```

```
[progress]
    rapid equilibrium
```

```
[velocities]
    directory ./examples/P450/data/4a low
    extension txt
    variable R
    file mix | concentration A = 0.05, B = 0.05
```

```
[output]
    directory ./examples/P450/output/substrate/models
```

```
[end]
```