Supplemental Material

Biotransformation of BDE-47 to Potentially Toxic Metabolites Is Predominantly Mediated by Human CYP2B6

Maria Luisa Feo, Michael S. Gross, Barbara P. McGarrigle, Ethel Eljarrat, Damià Barceló, Diana S. Aga and James R. Olson.

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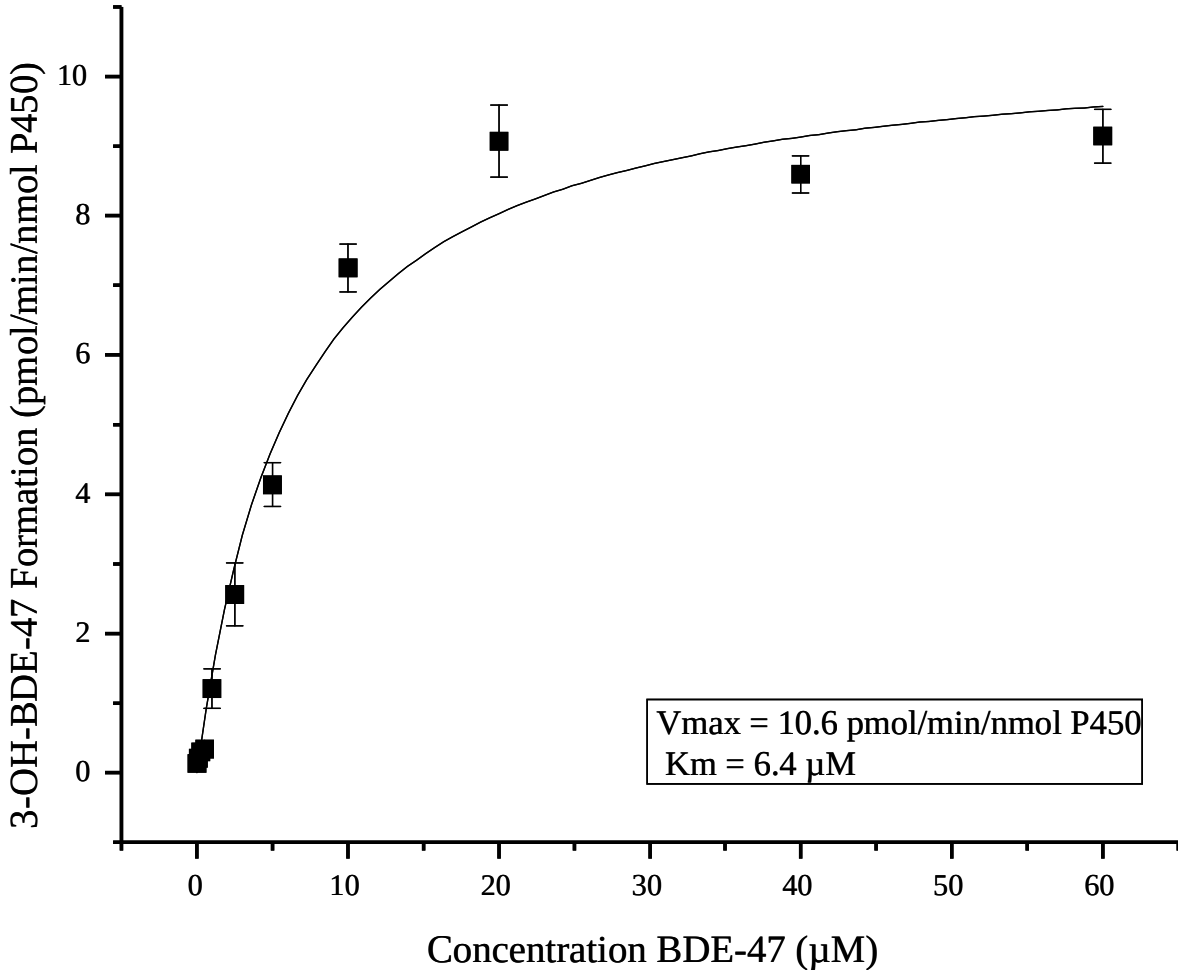
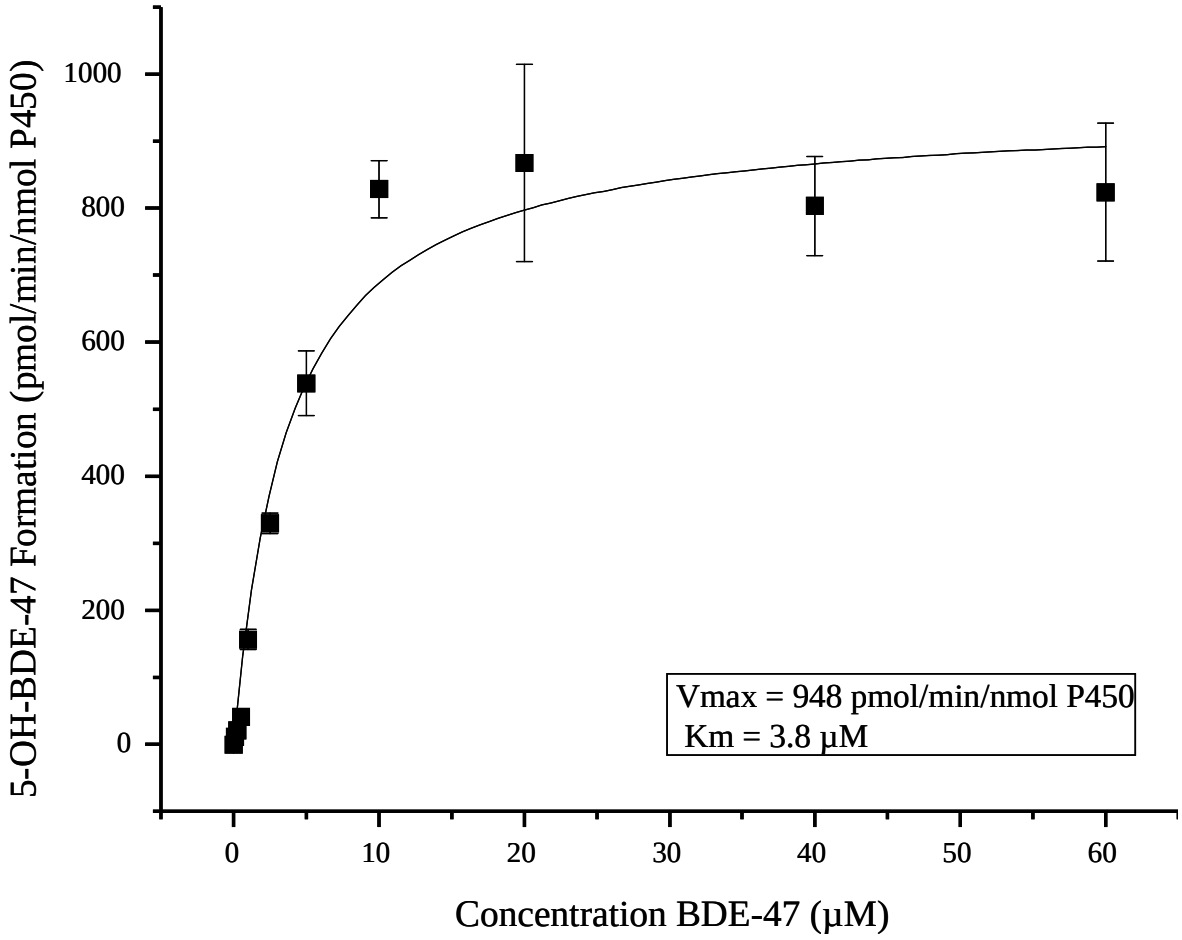
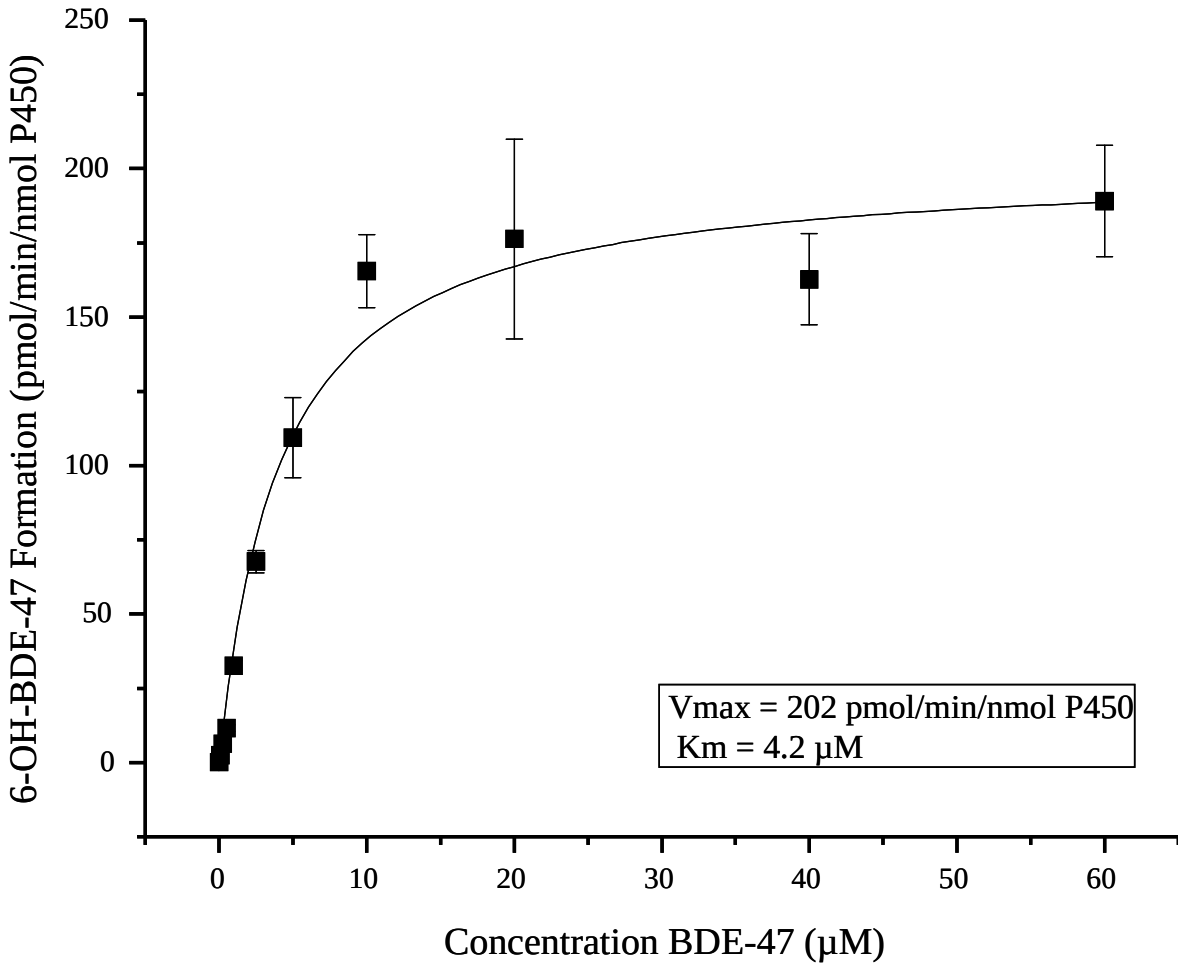
A)


3-OH-BDE-47 Formation (pmol/min/nmol P450)
10
8
6
4
2
0
0
10
20
30
40
50
60
Concentration BDE-47 (µM)
Vmax = 10.6 pmol/min/nmol P450
Km = 6.4 µM

B)

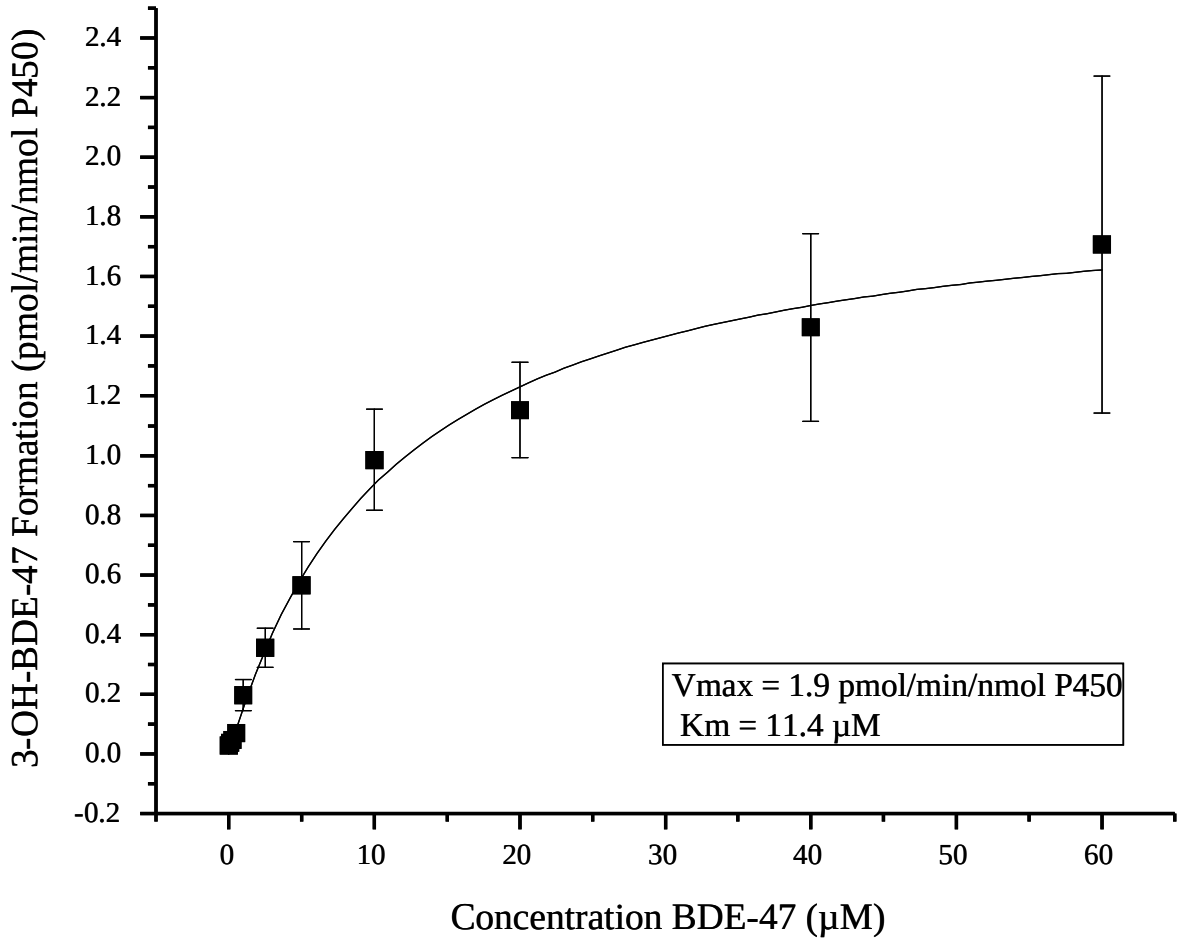

5-OH-BDE-47 Formation (pmol/min/nmol P450)
1000
800
600
400
200
0
0
10
20
30
40
50
60
Concentration BDE-47 (µM)
Vmax = 948 pmol/min/nmol P450
Km = 3.8 µM

C)

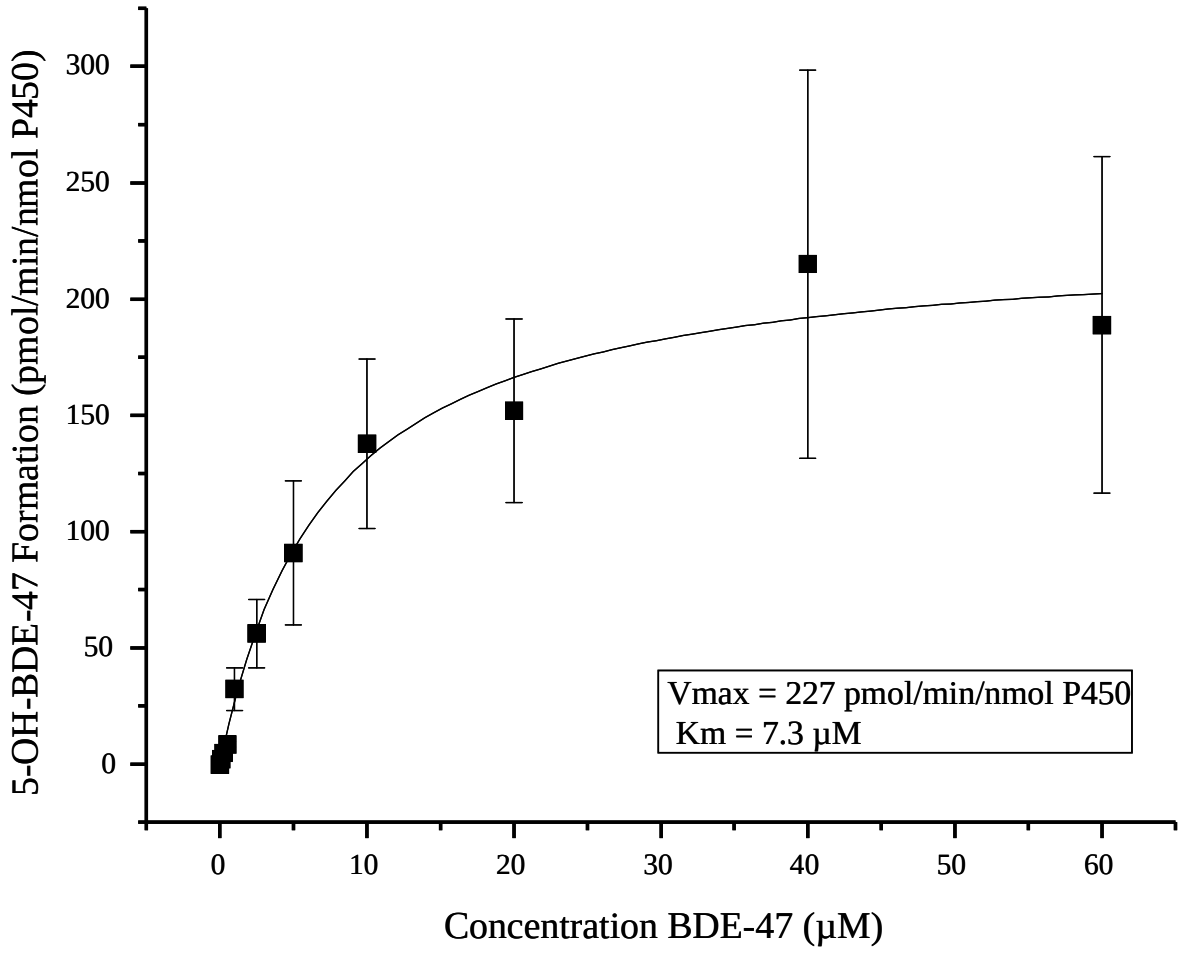


Supplemental Material, Figure S1. Formation of A) 3OH-BDE-47, B) 5-OH-BDE-47 and C) 6-OH-BDE-47 evaluated for over a range of substrate concentrations (0.1 to 60 µM) at an incubation time of 60 min using recombinant CYP2B6.

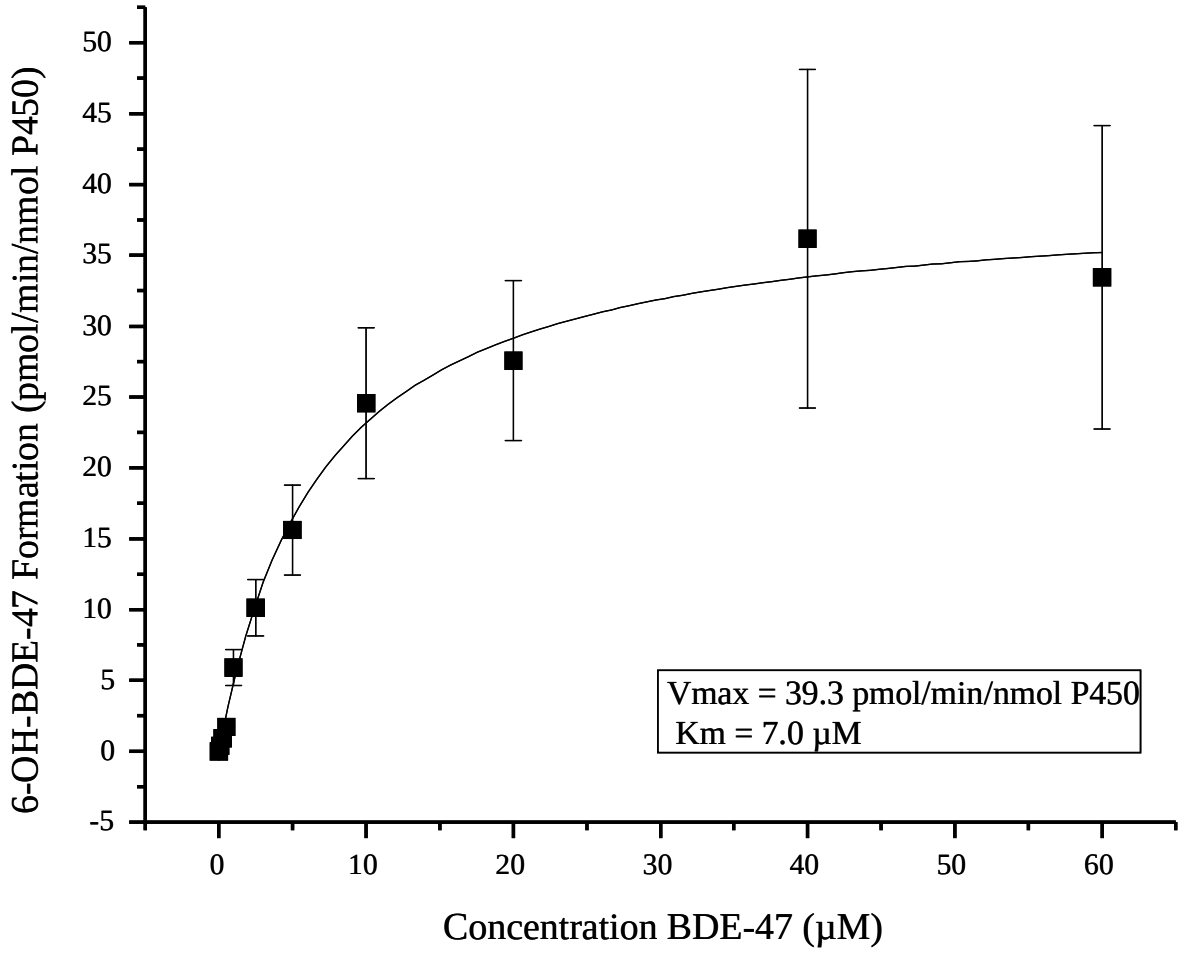
A)


3-OH-BDE-47 Formation (pmol/min/nmol P450)
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
0
10
20
30
40
50
60
Concentration BDE-47 (µM)
Vmax = 1.9 pmol/min/nmol P450
Km = 11.4 µM

B)


5-OH-BDE-47 Formation (pmol/min/nmol P450)
300
250
200
150
100
50
0
0
10
20
30
40
50
60
Concentration BDE-47 (µM)
Vmax = 227 pmol/min/nmol P450
Km = 7.3 µM

C)



Supplemental Material, Figure S2. Formation of A) 3OH-BDE-47, B) 5-OH-BDE-47 and C) 6-OH-BDE-47 evaluated for over a range of substrate concentrations (0.1 to 60 µM) at an incubation time of 60 min using pooled human liver microsomes.