

FIG. 1A, SHEET 1 (*E. coli* 3HPTGC)

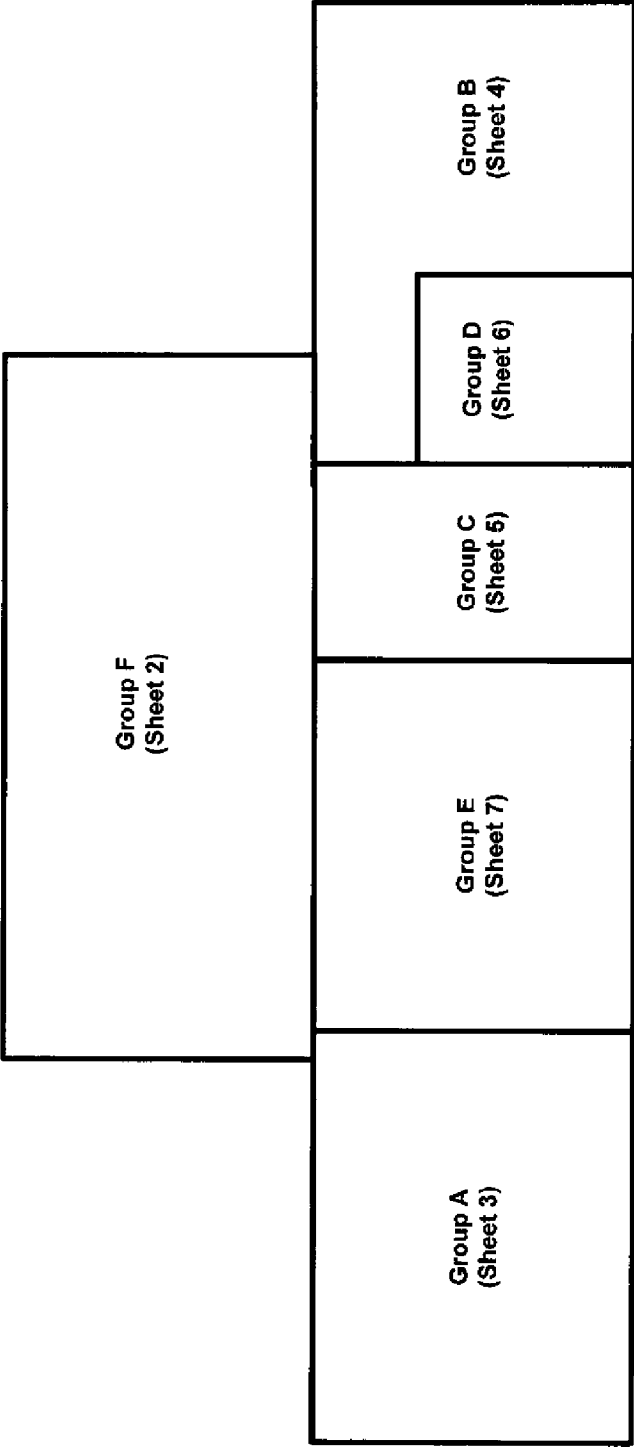


FIG. 1A, SHEET 3 (Group A, *E. coli* 3HPTGC)

(Continued)

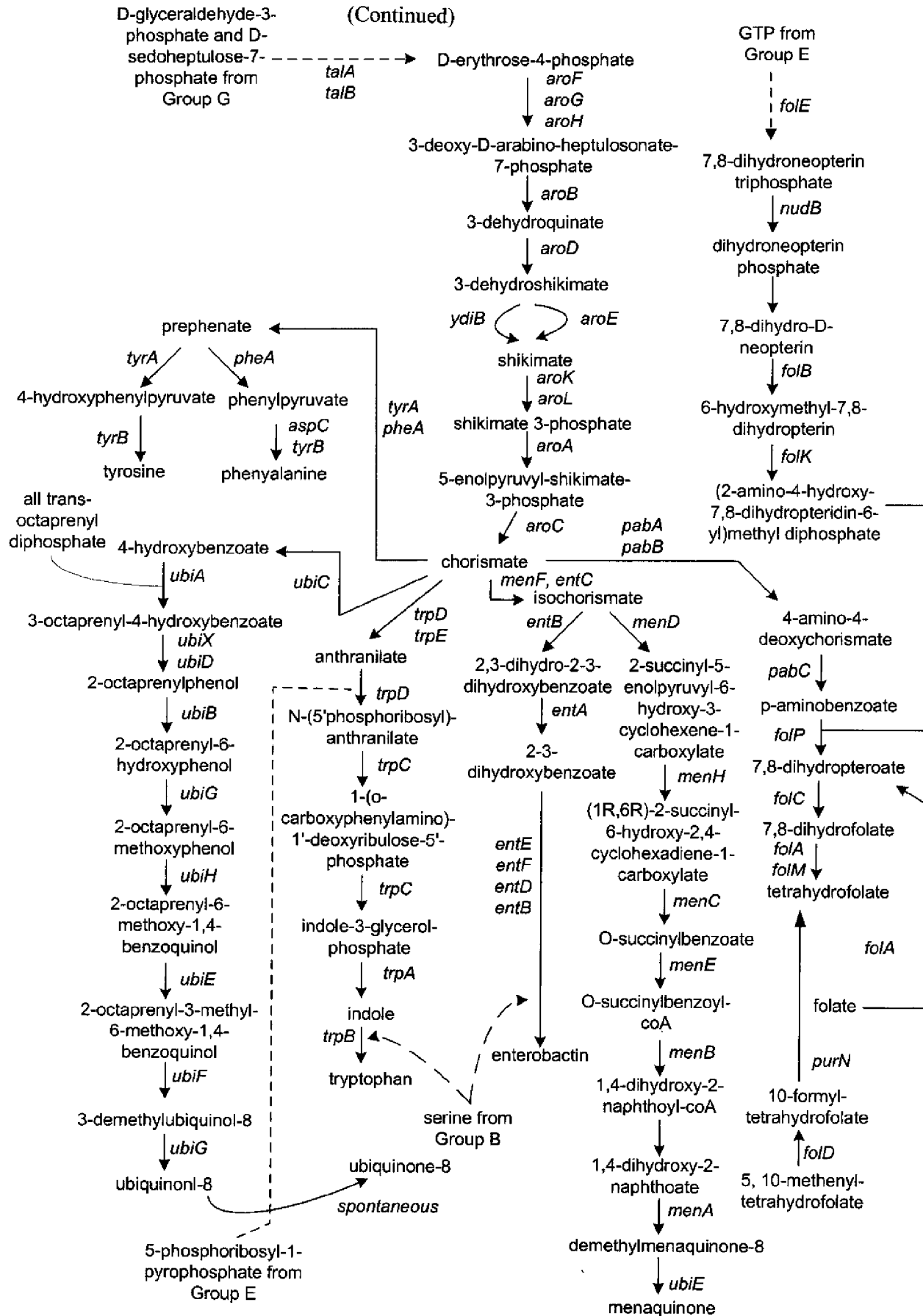


FIG. 1A, SHEET 4 (Group B, *E. coli* 3HPTGC)
(Continued)

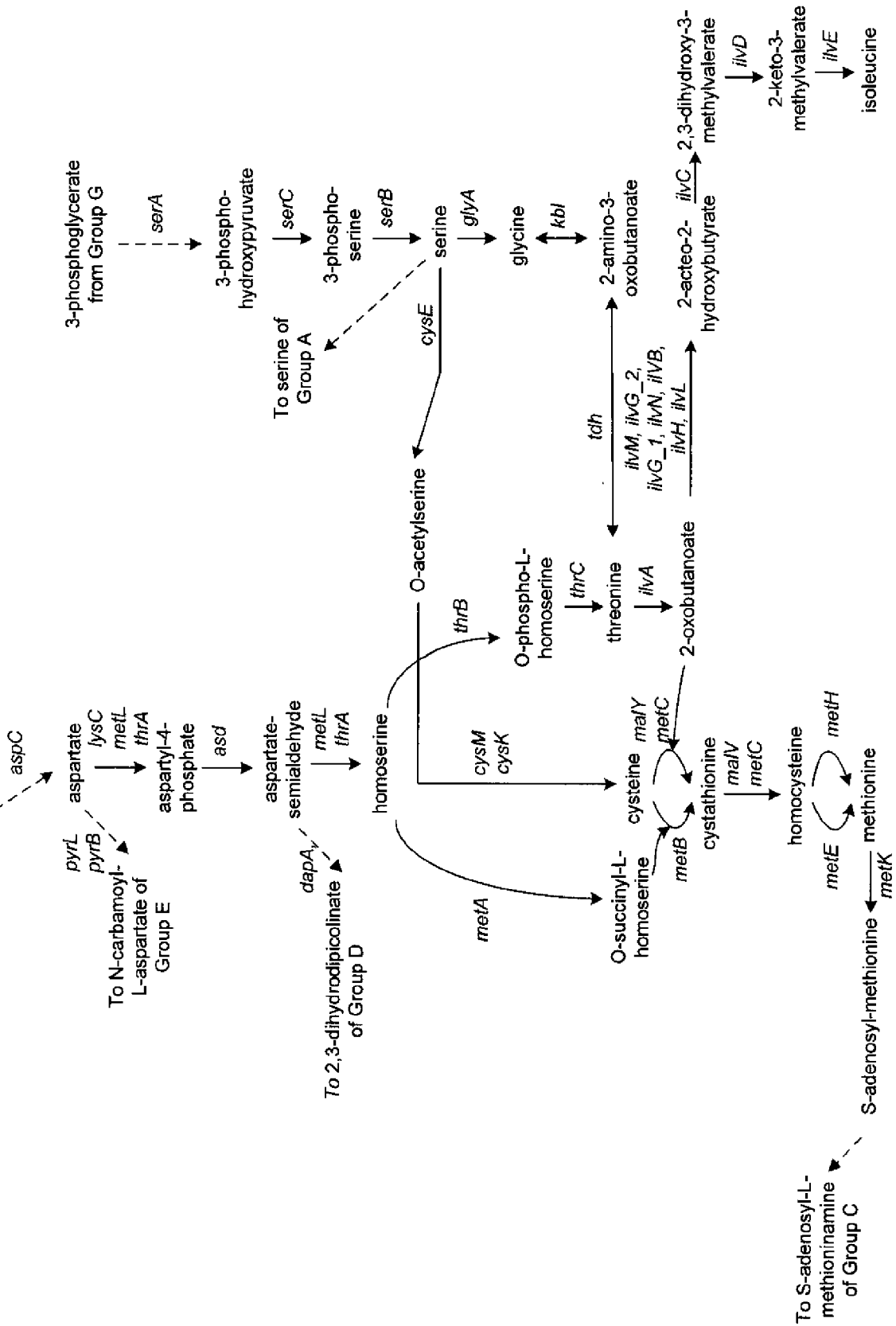


FIG. 1A, SHEET 5 (Group C, *E. coli* 3HPTGC)

(Continued)

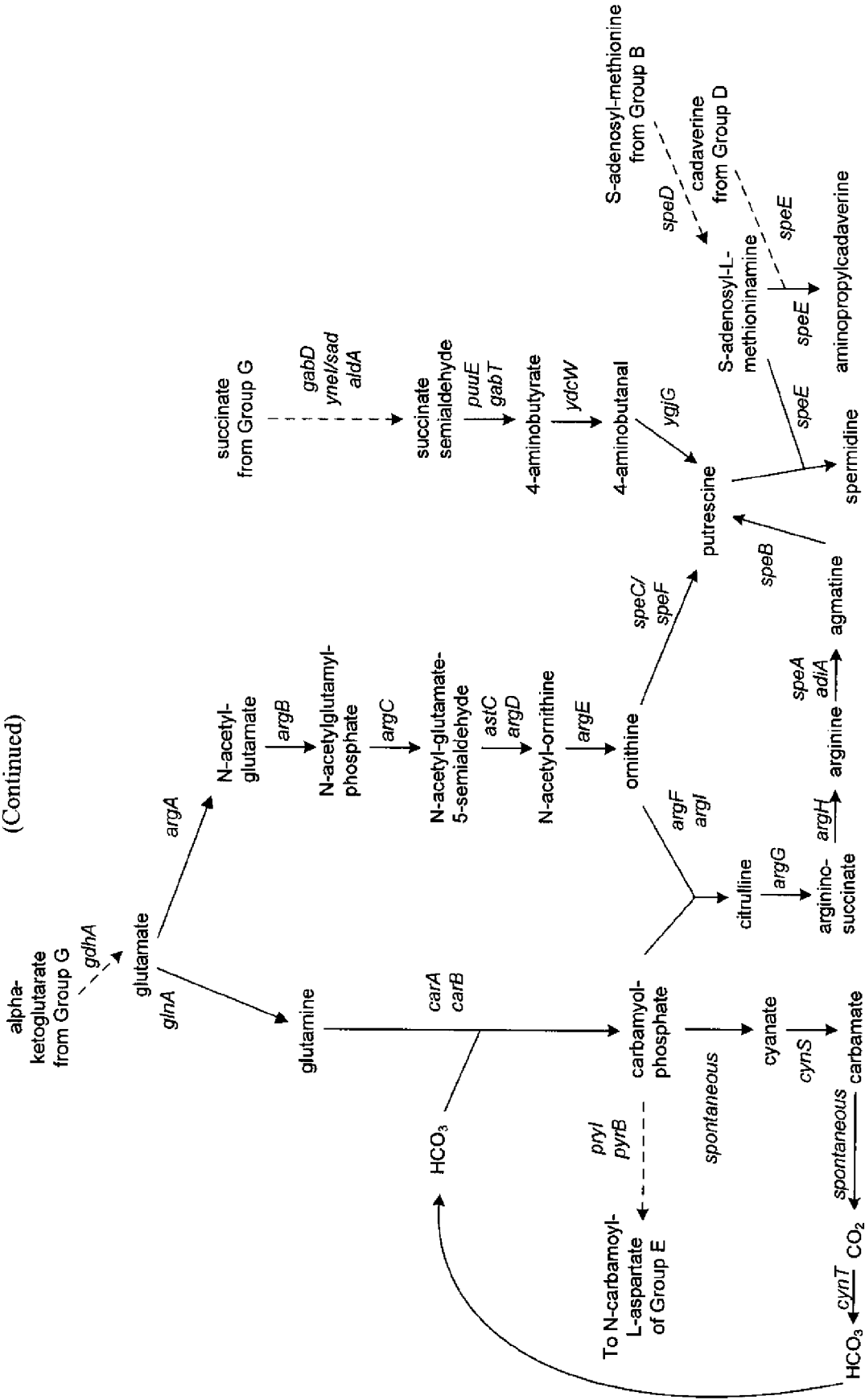
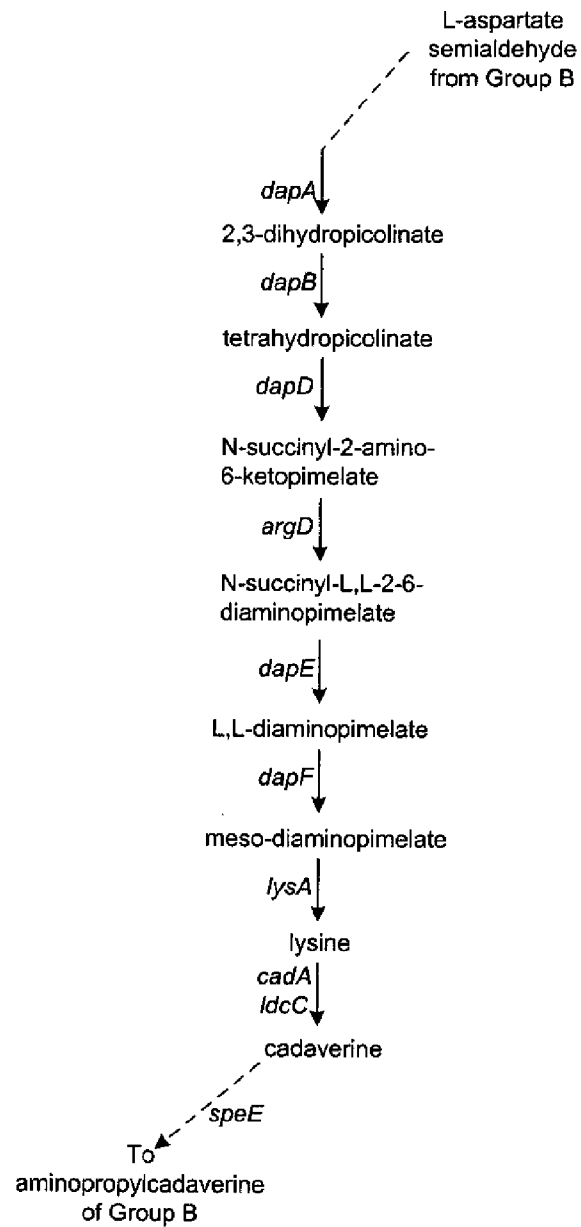


FIG. 1A, SHEET 6 (Group D, *E. coli* 3HPTGC)
(Continued)



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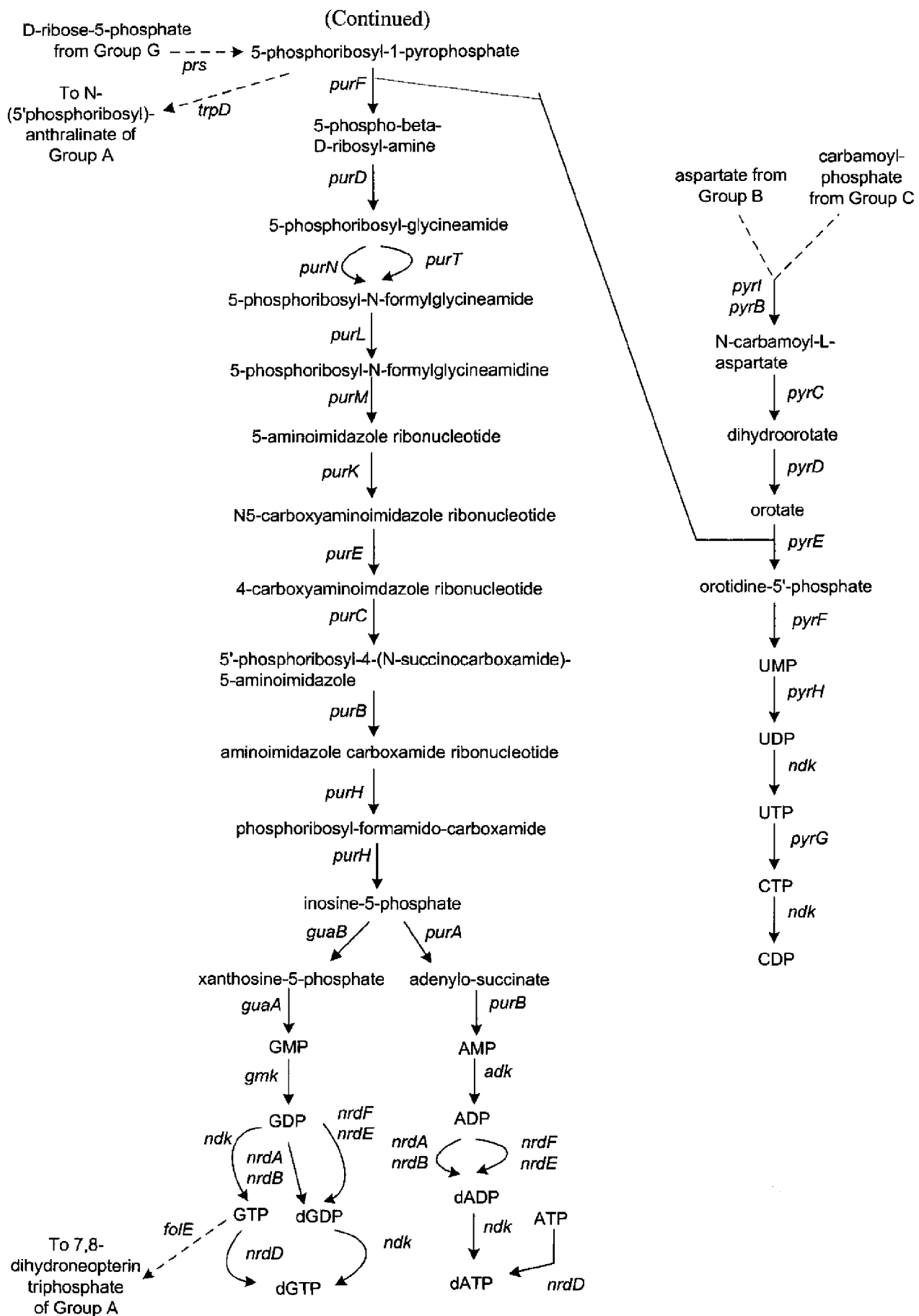
FIG. 1A, SHEET 7 (Group E, *E. coli* 3HPTGC)

FIG. 1B, SHEET 1 (*Bacillus subtilis* 3HPTGC)

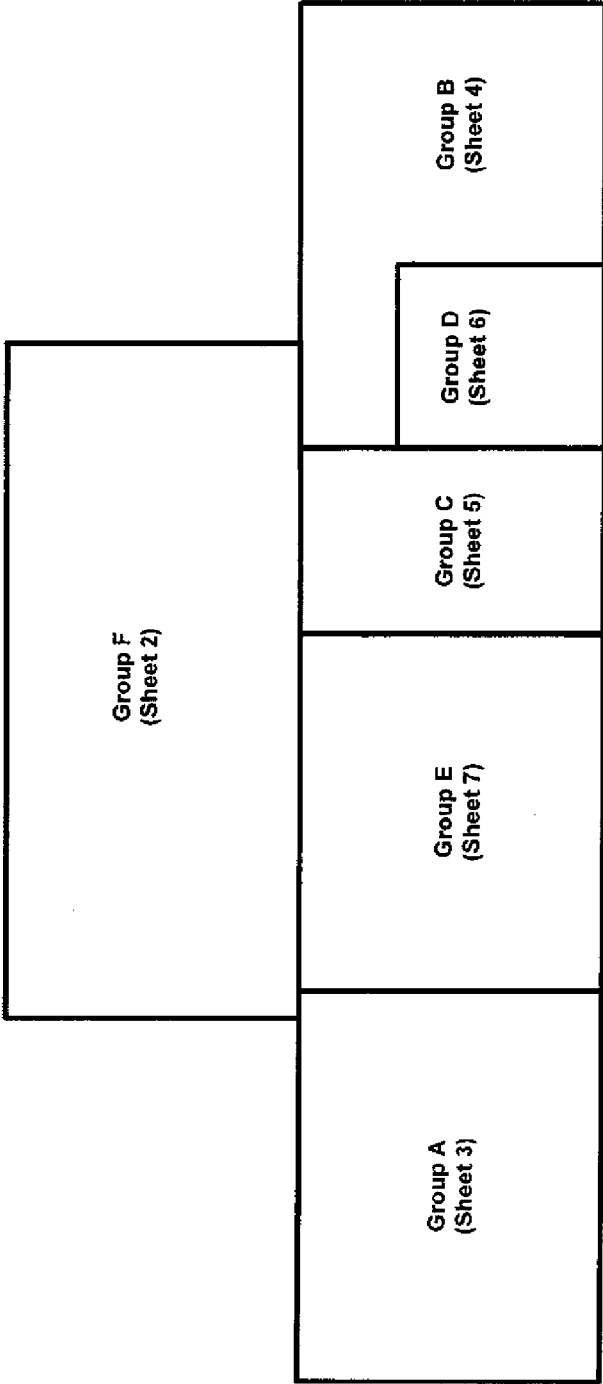
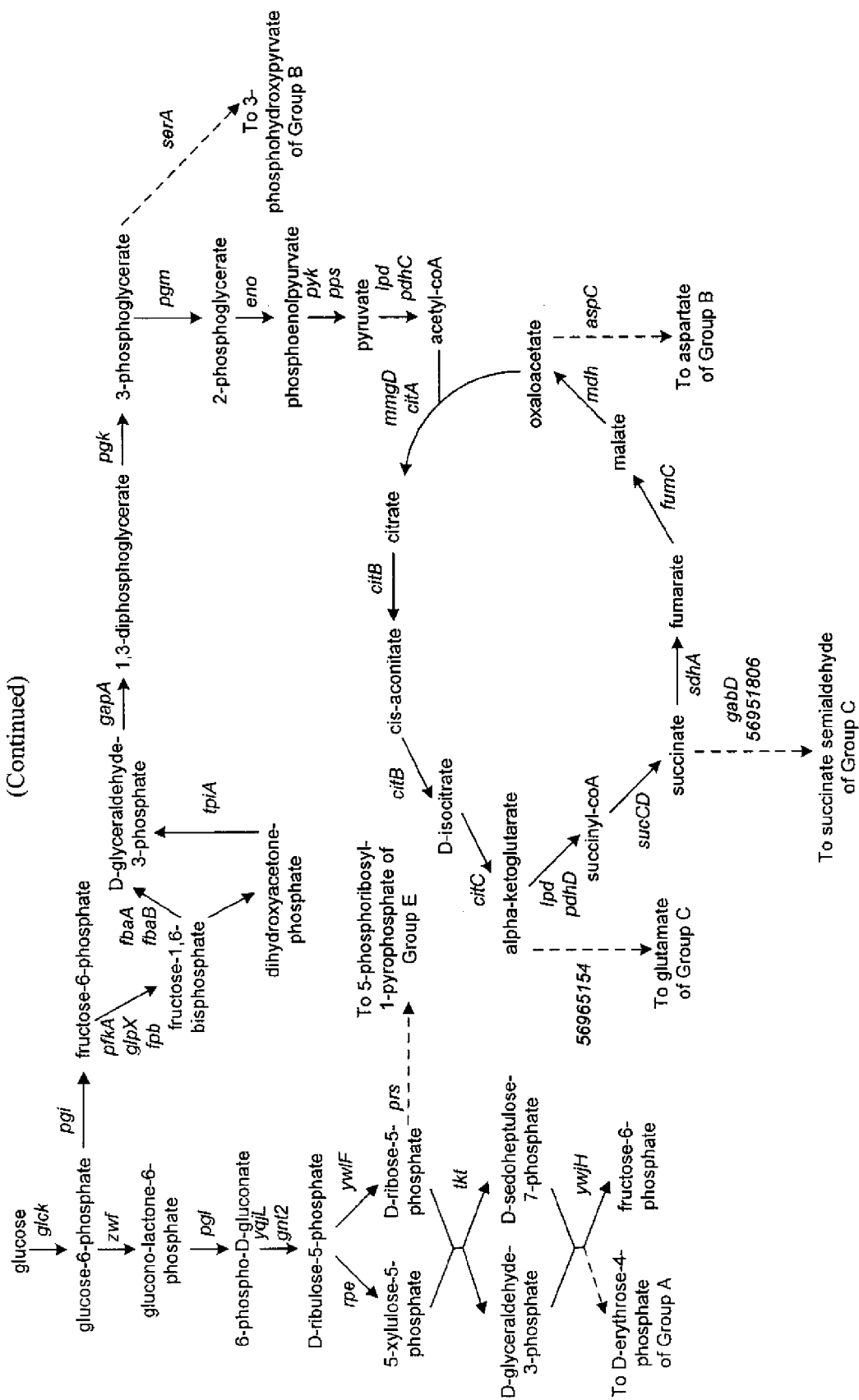


FIG. 1B, SHEET 2 (Group F, *Bacillus subtilis* 3HPTGC)

(Continued)



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FIG. 1B, SHEET 3 (Group A, *Bacillus subtilis* 3HPTGC)

(Continued)

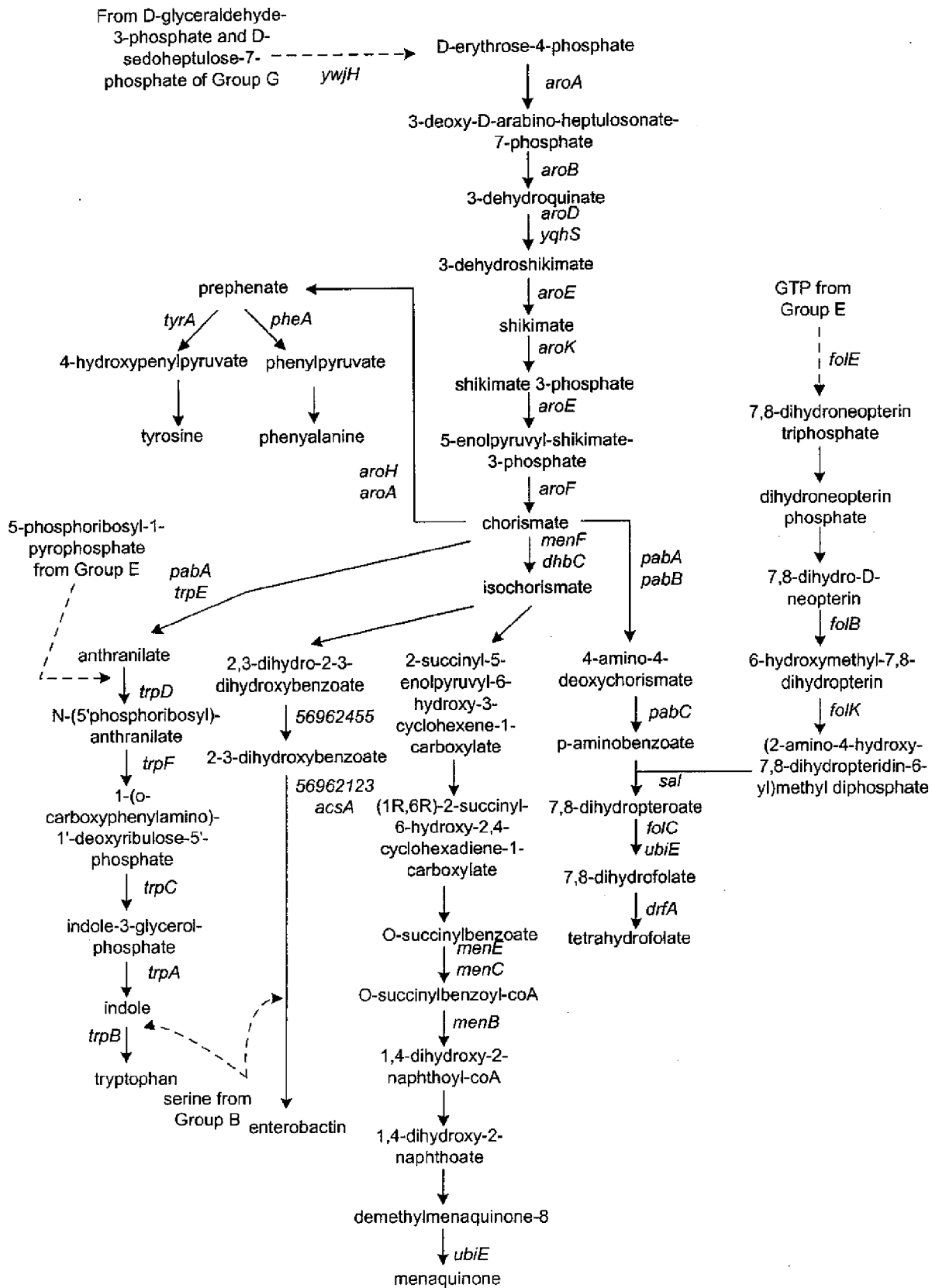


FIG. 1B, SHEET 4 (Group B, *Bacillus subtilis* 3HPTGC) (Continued)

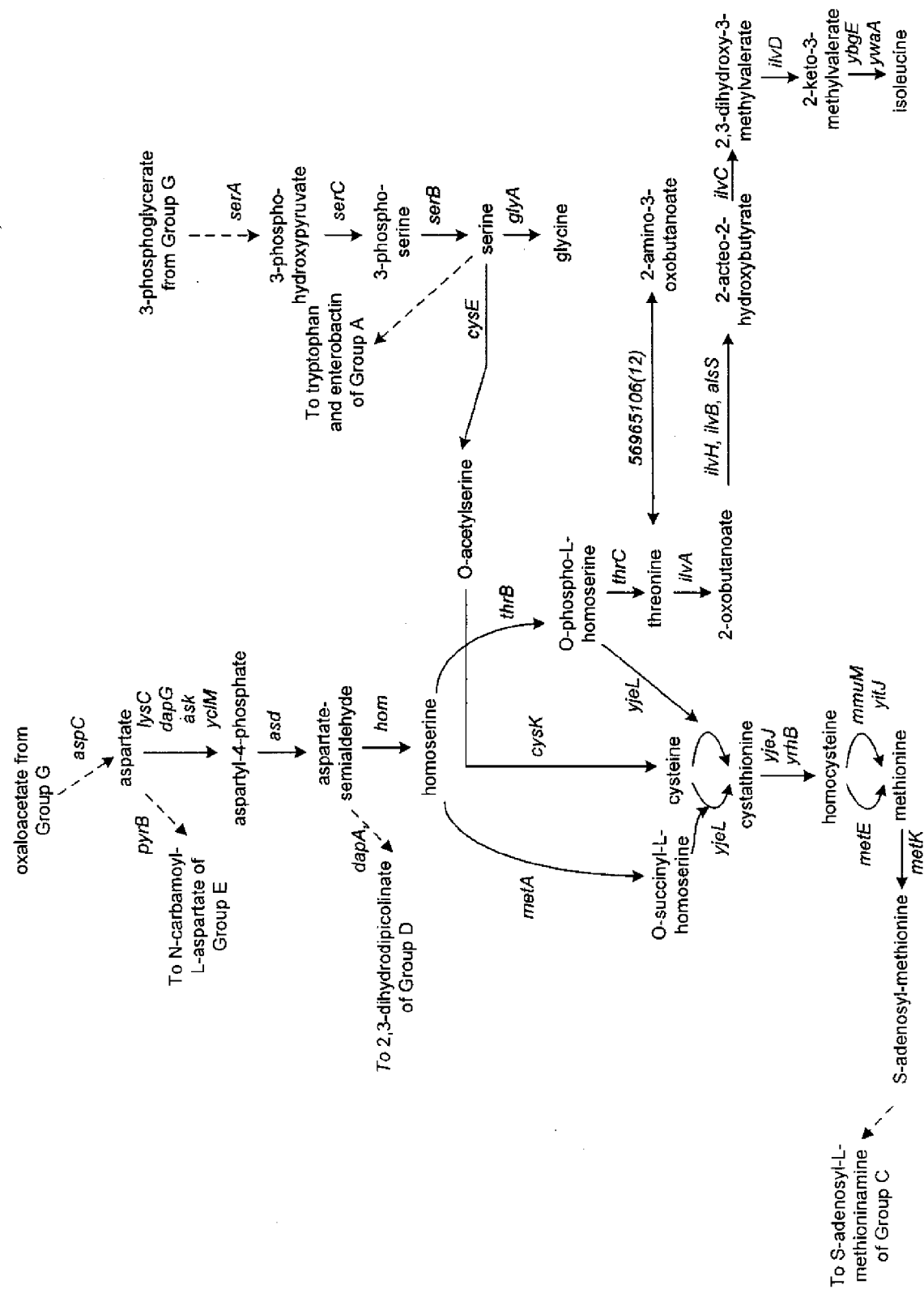


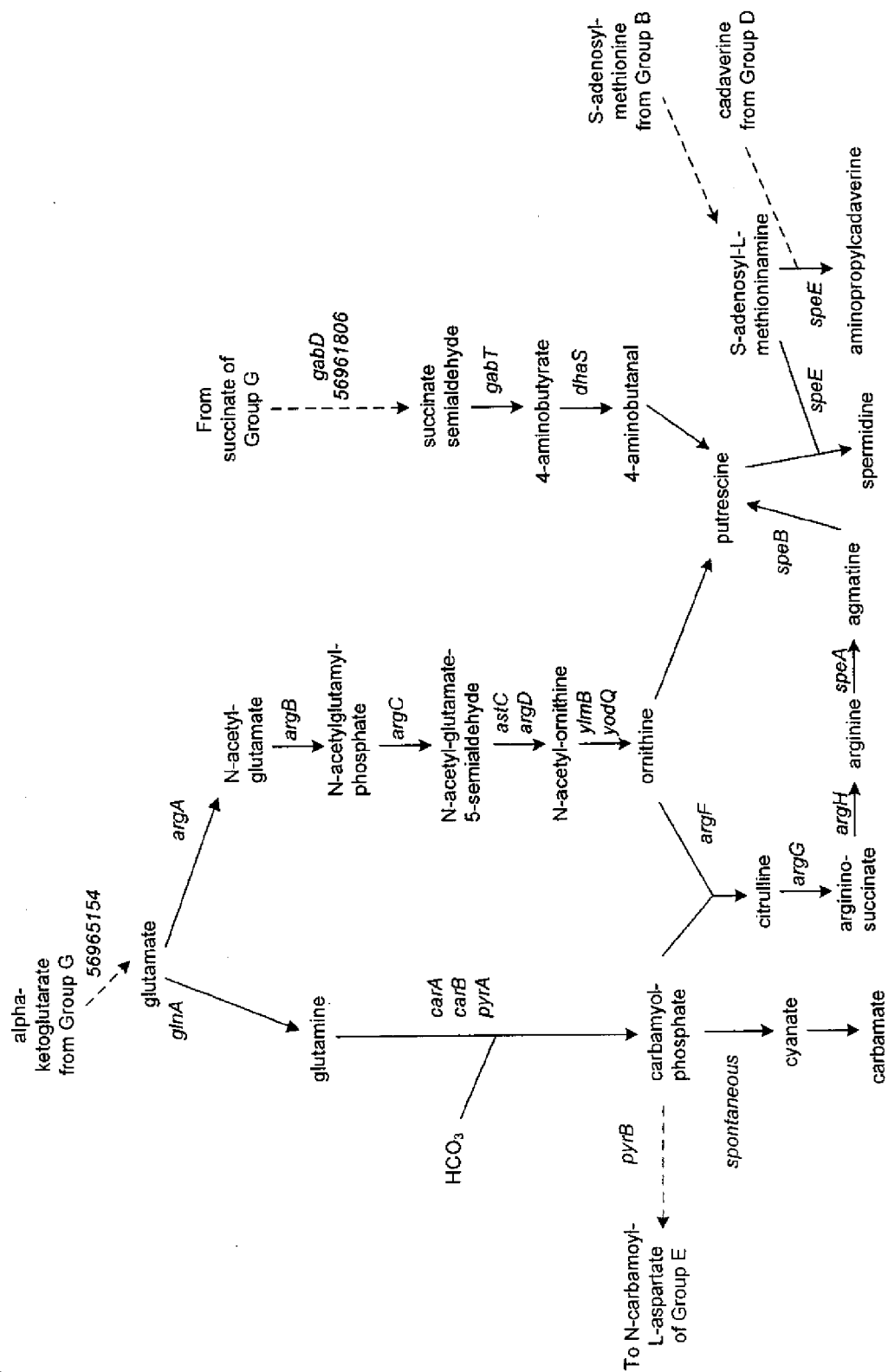
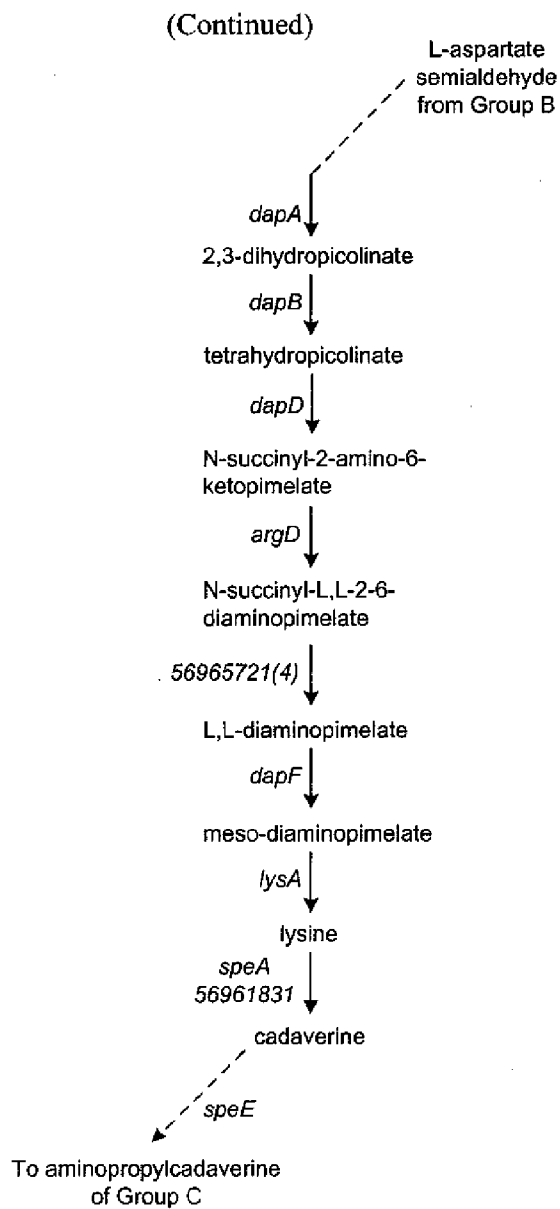
FIG. 1B, SHEET 5 (Group C, *Bacillus subtilis* 3HPTGC) (Continued)

FIG. 1B, SHEET 6 (Group D, *Bacillus subtilis* 3HPTGC)

[illegible]

FIG. 1C, SHEET 1 (*Saccharomyces cerevisiae* 3HPTGC)

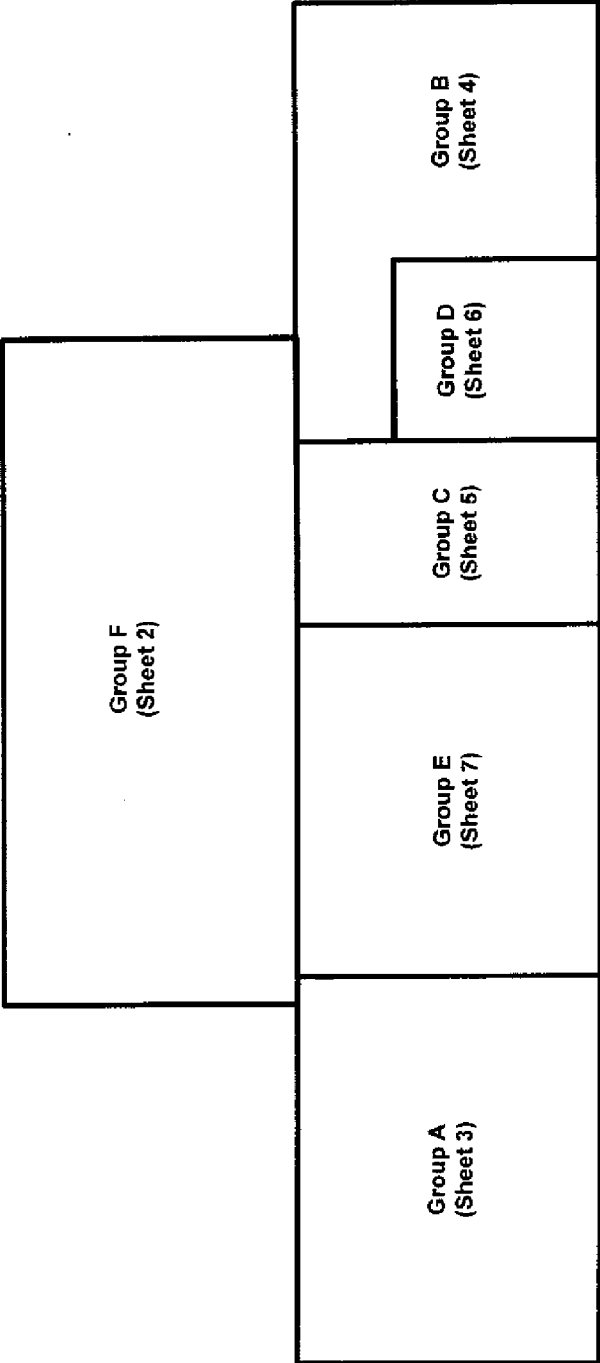
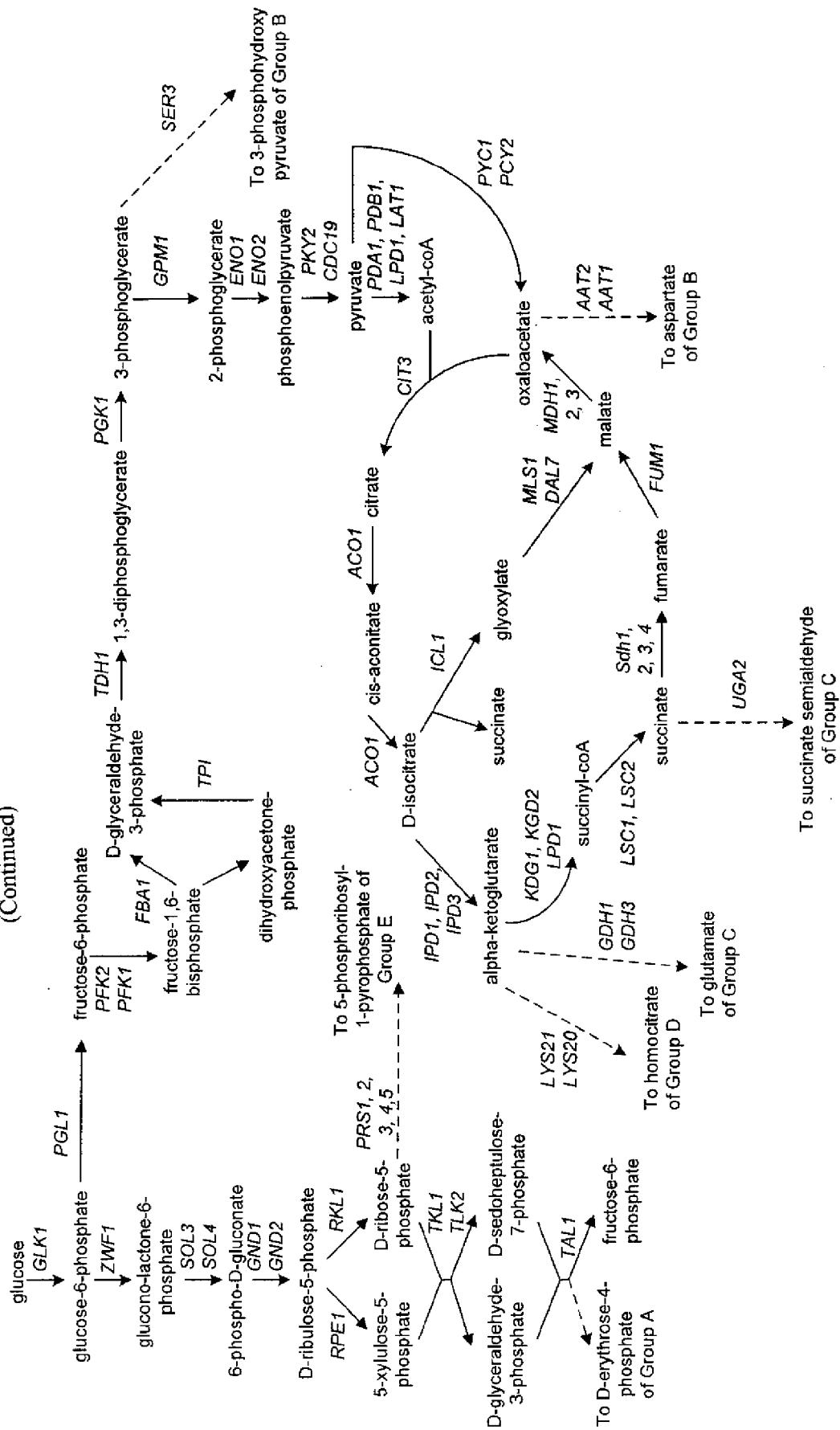


FIG. 1C, SHEET 2 (Group F, *Saccharomyces cerevisiae* 3HPTGC)

(Continued)



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FIG. 1C, SHEET 3 (Group A, *Saccharomyces cerevisiae* 3HPTGC)

(Continued)

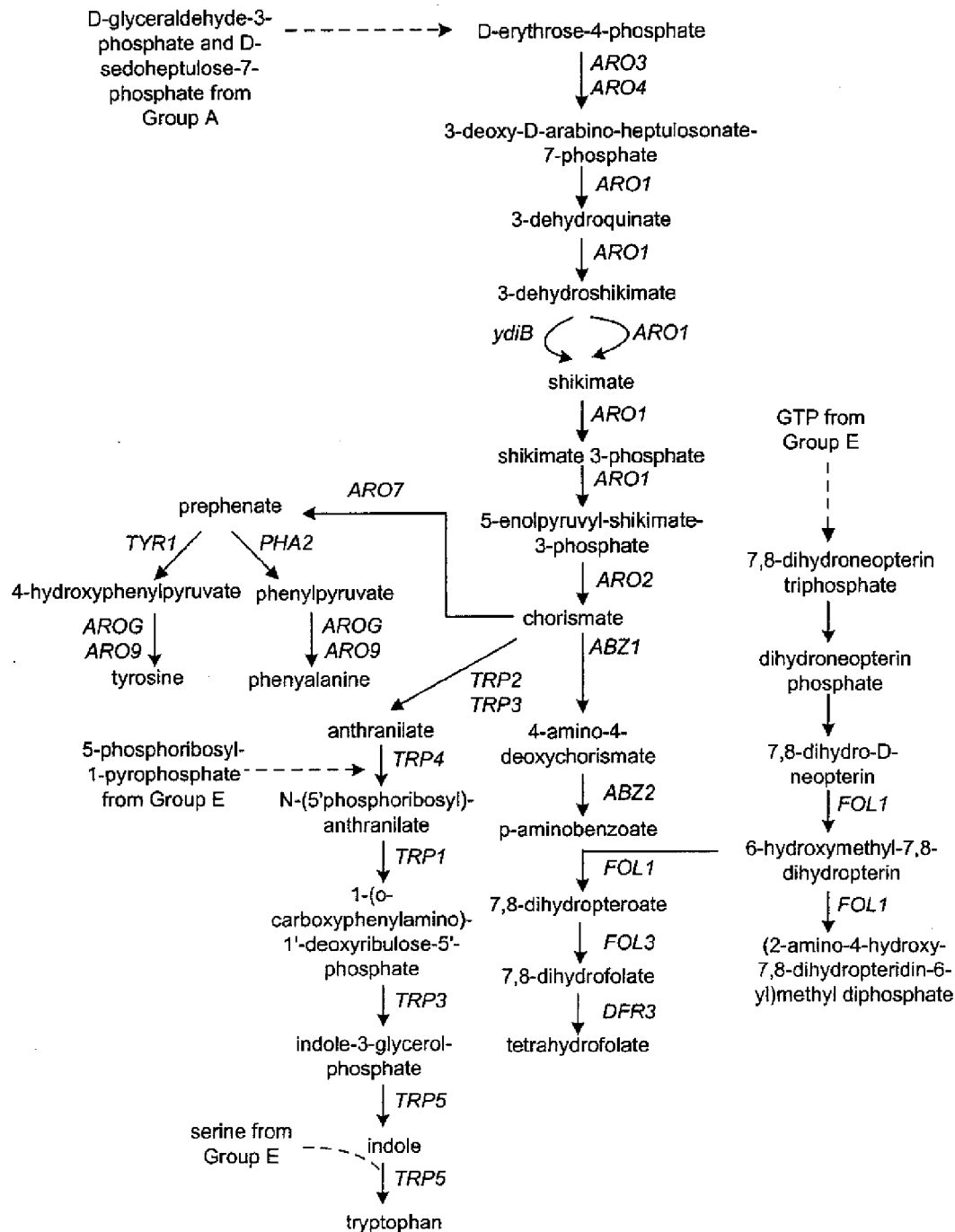


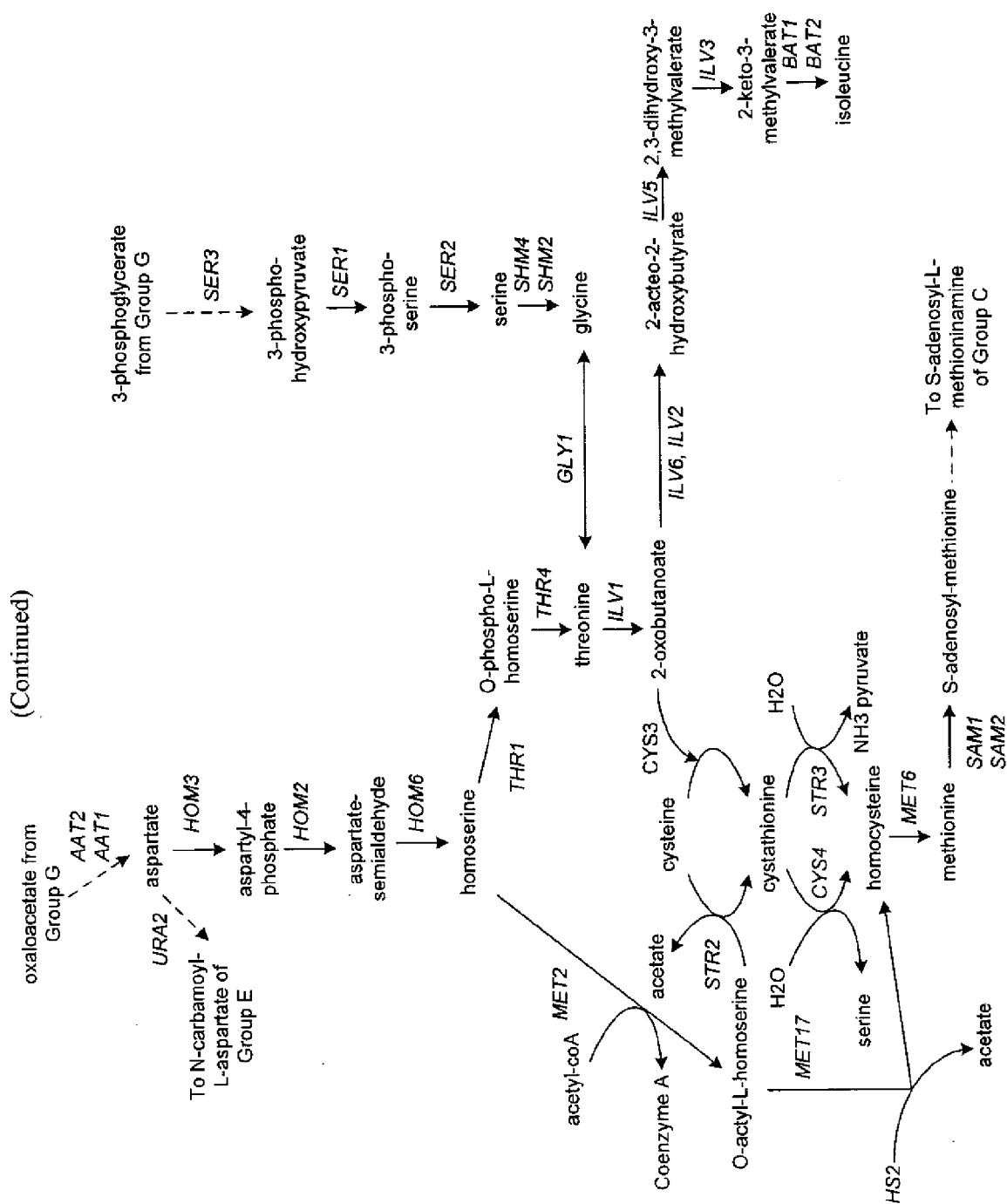
FIG. 1C, SHEET 4 (Group B, *Saccharomyces cerevisiae* 3HPTGC)

FIG. 1C, SHEET 5 (Group C, *Saccharomyces cerevisiae* 3HPTGC)

(Continued)

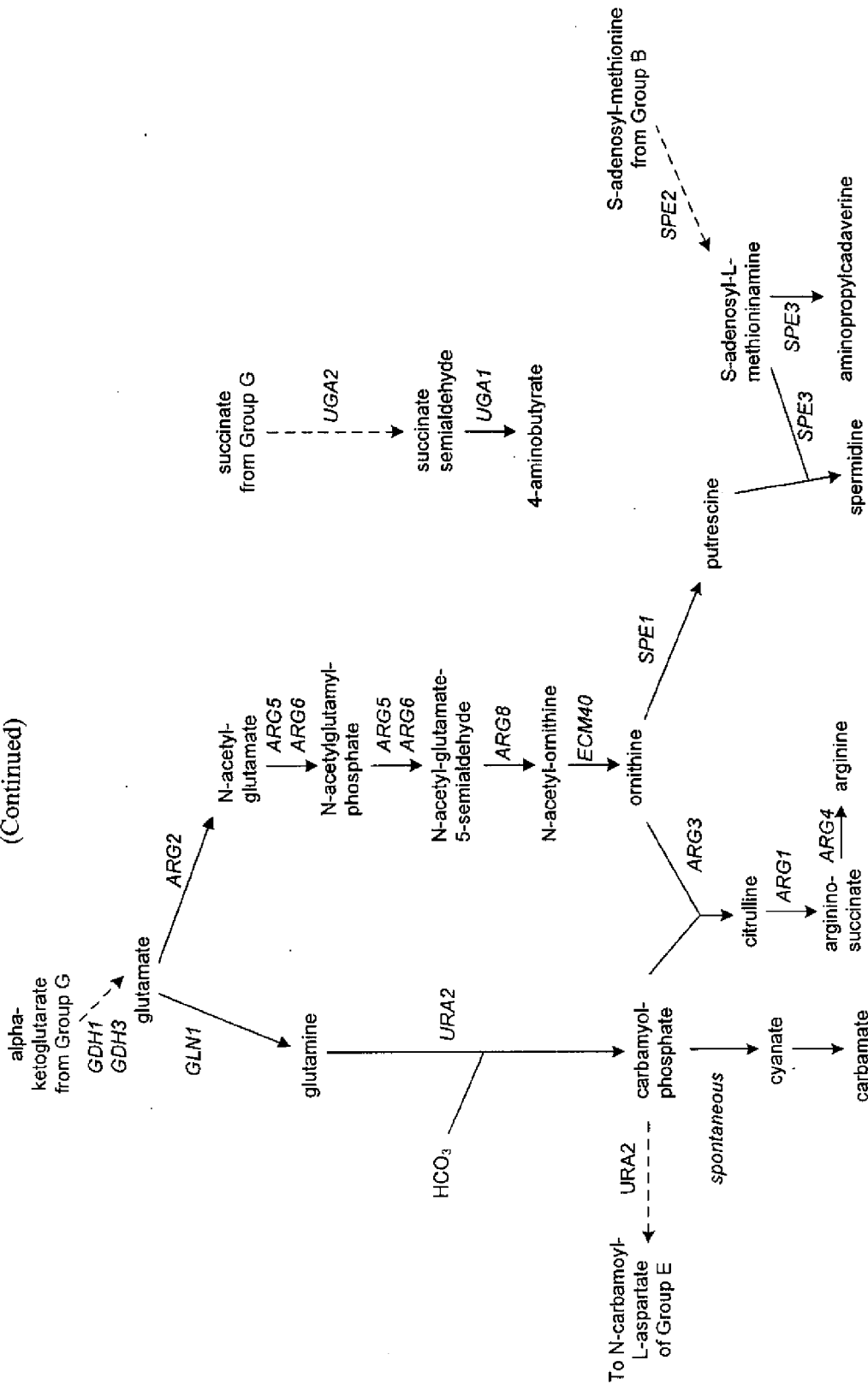


FIG. 1C, SHEET 6 (Group D, *Saccharomyces cerevisiae* 3HPTGC)

(Continued)

alpha-ketoglutarate
from Group GLYS21 ↓
LYS20 ↓

Homocitrate

LYS4 ↓

Homoaconitate

LYS4 ↓

Homo-Isocitrate

LYS12 ↓

alpha-ketoadipate

↓

L-2-Aminoadipate

LYS2 ↓

L-2-Aminoadipate
6-semialdehyde

LYS9 ↓

Saccharopine

LYS1 ↓

L-Lysine

FIG. 1C, SHEET 7 (Group E *Saccharomyces cerevisiae* 3HPTGC) (Continued)

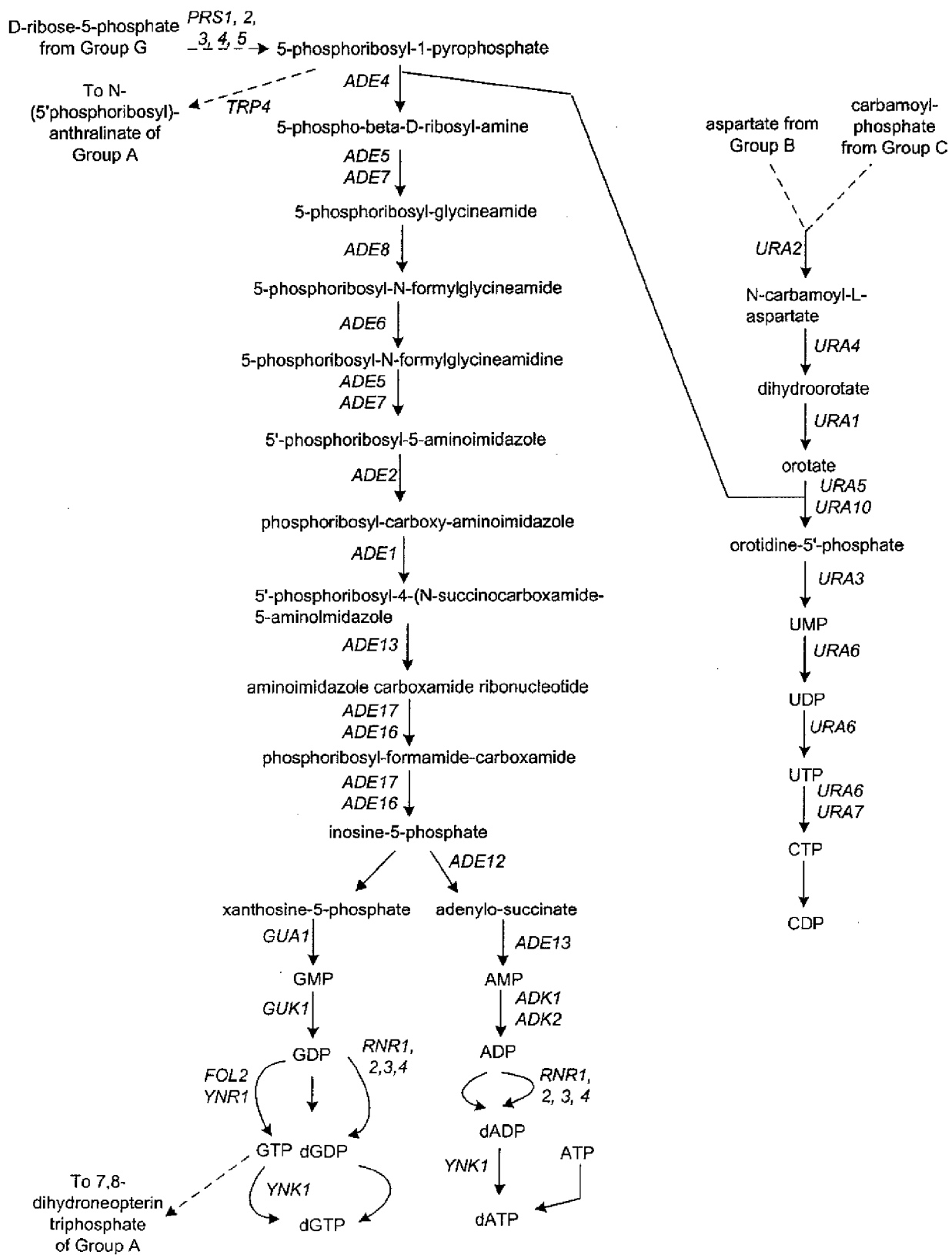
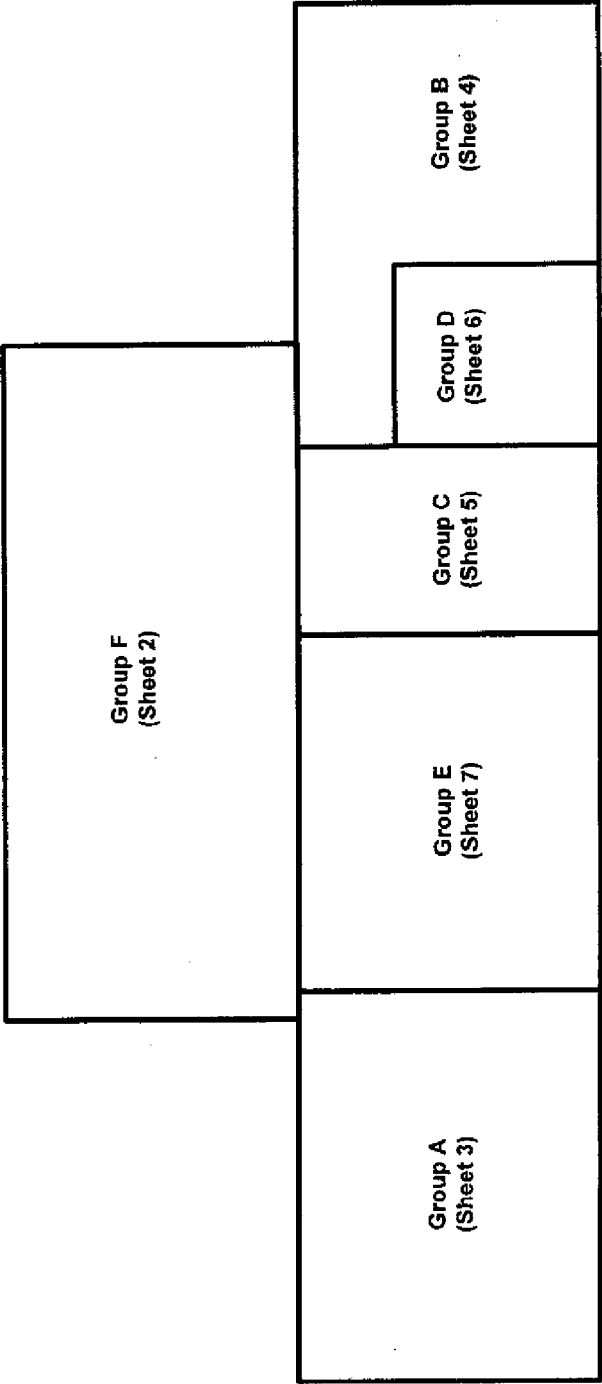


FIG. 1D, SHEET 1 (*Cupriavidus necator* 3HPTGC)



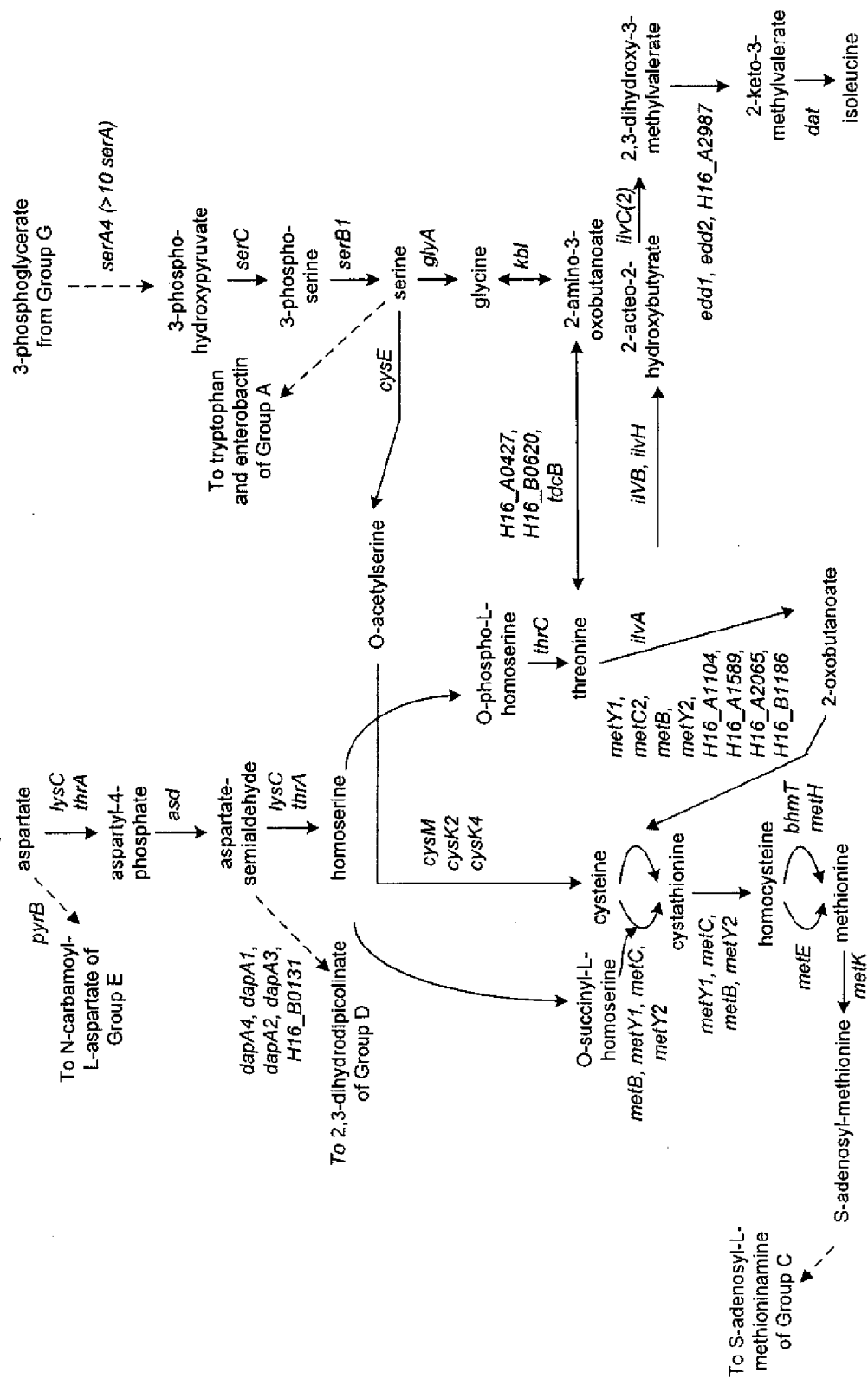
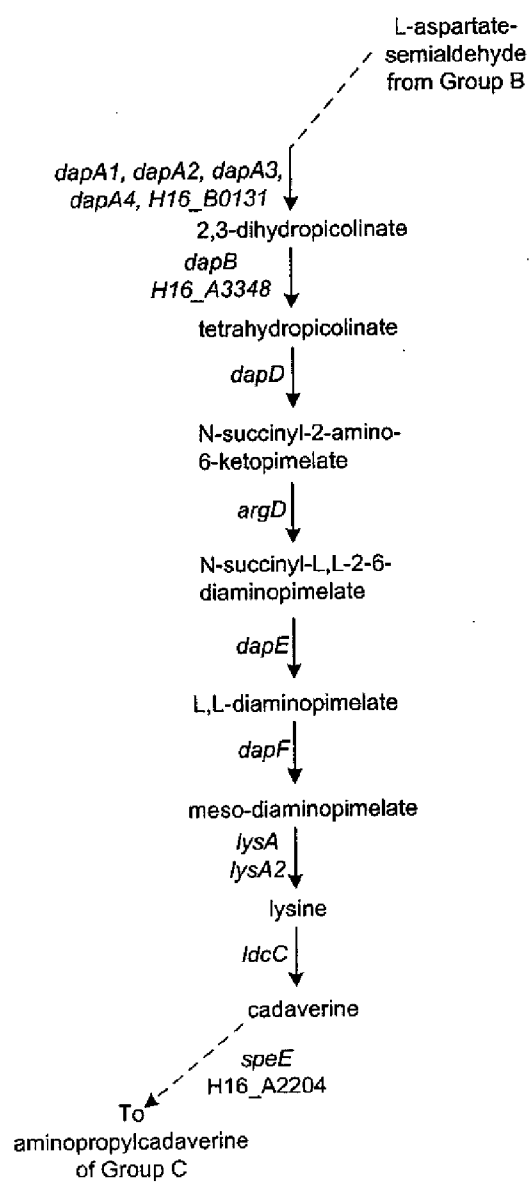


FIG. 1D, SHEET 6 (Group D, *Cupriavidus necator* 3HPTGC)

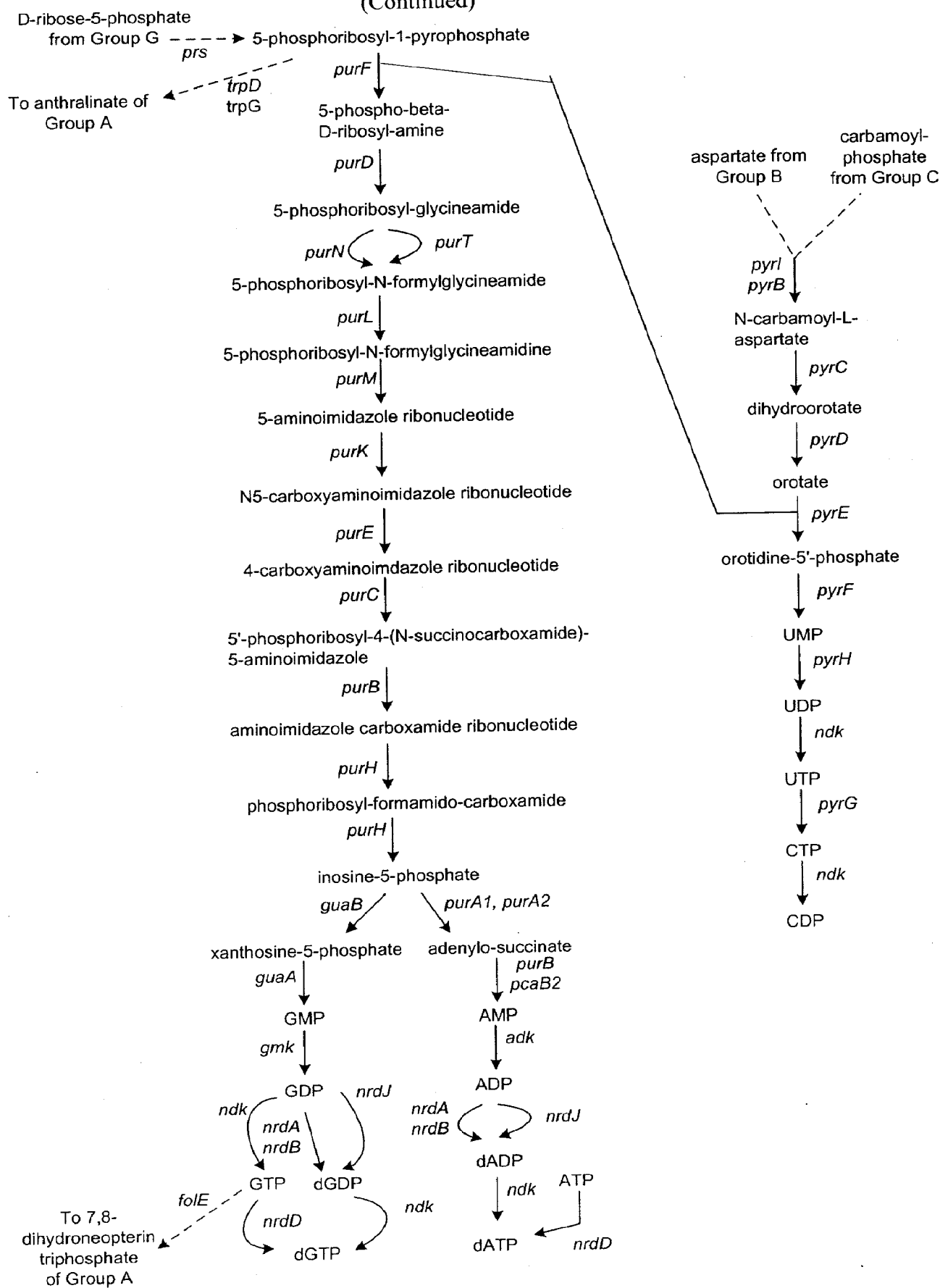
(Continued)



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FIG. 1D, SHEET 7 (Group E, *Cupriavidus necator* 3HPTGC)

(Continued)



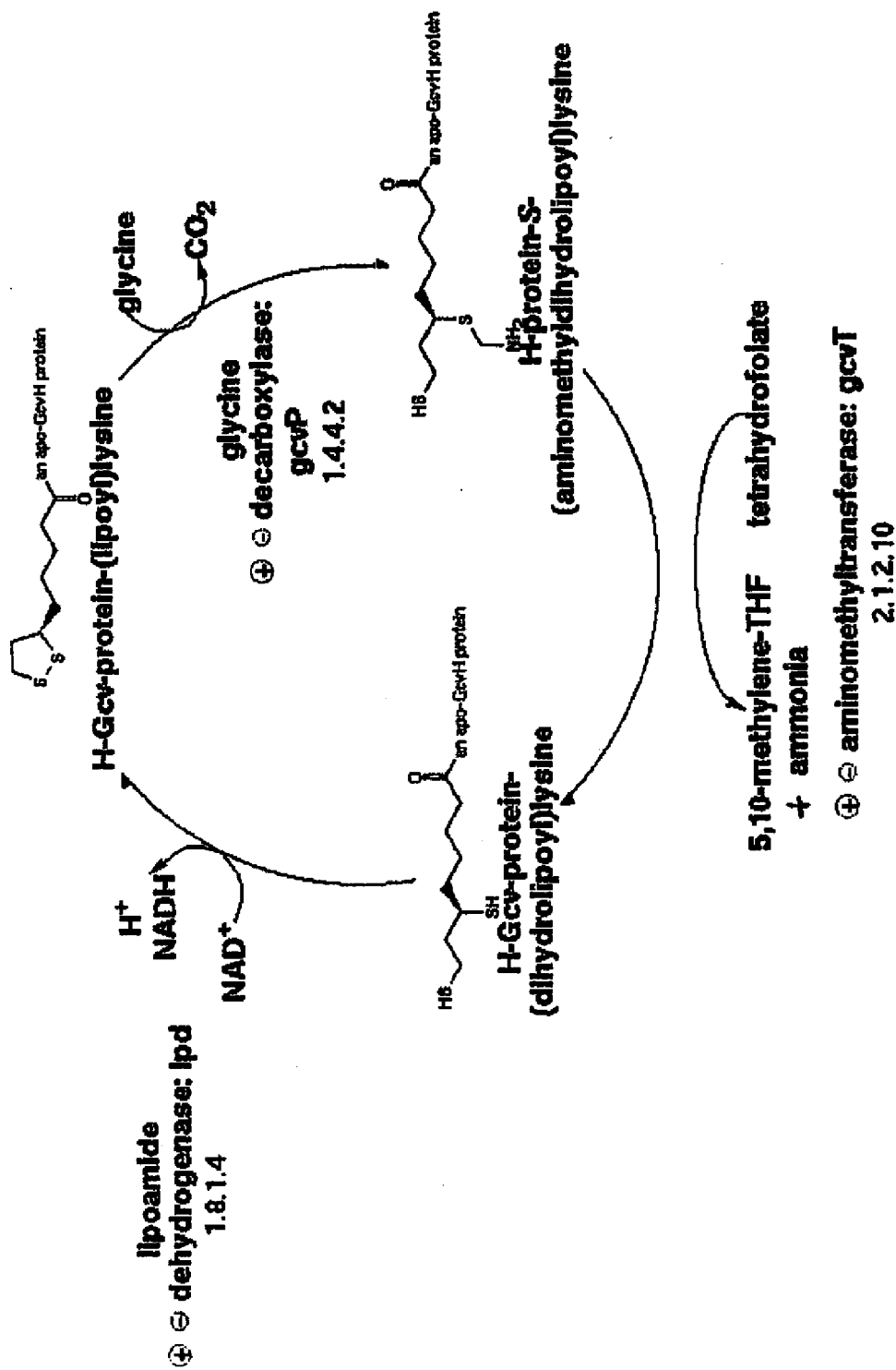


Figure 2

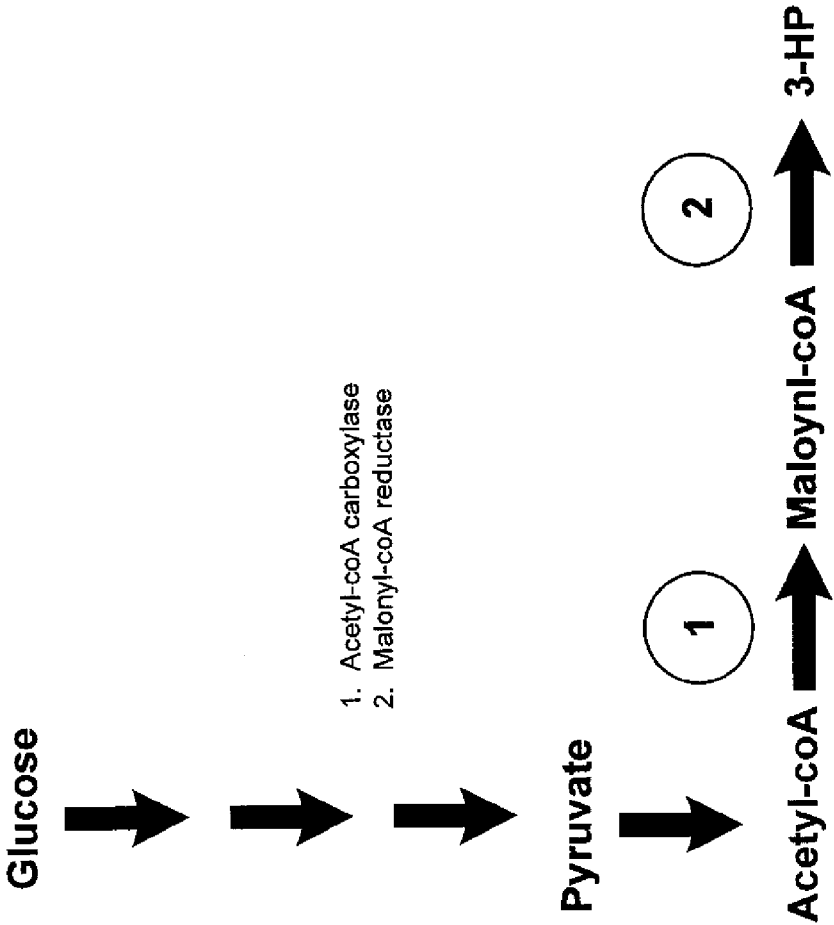


Figure 3

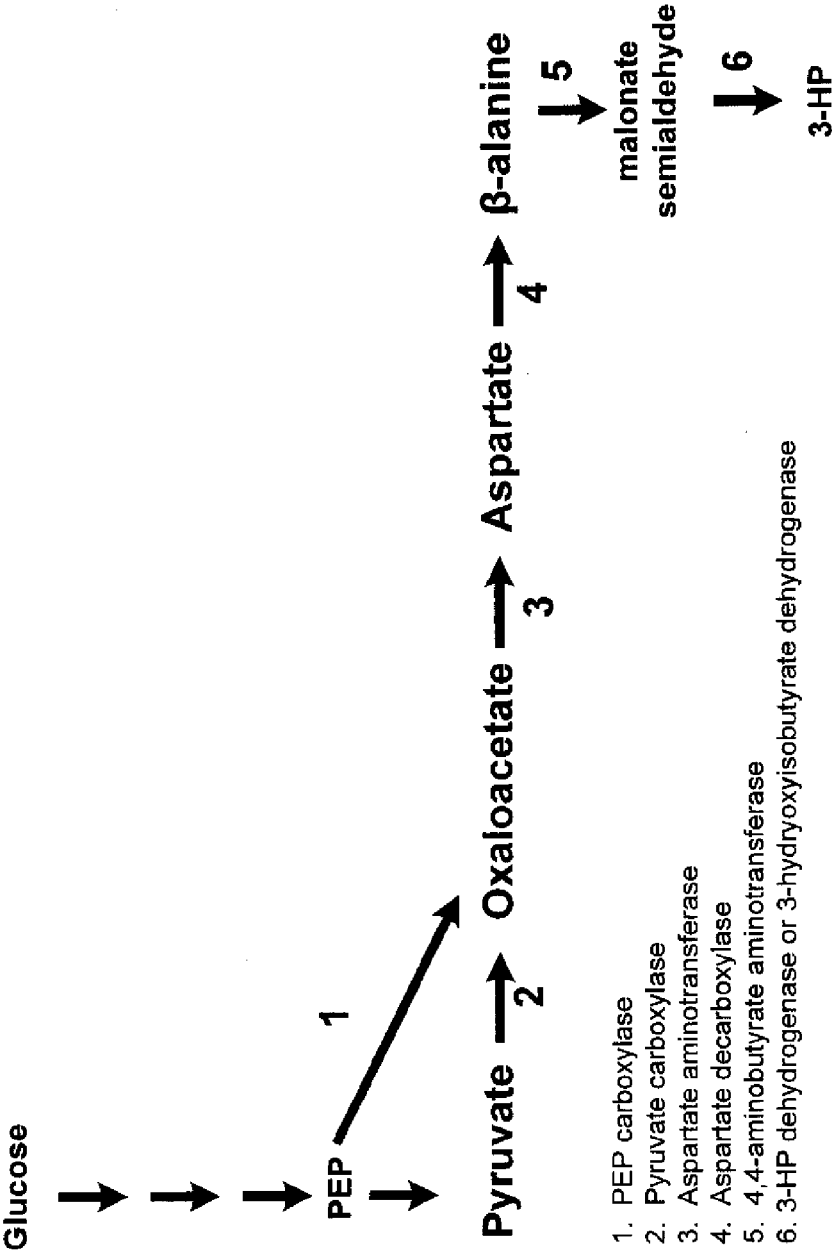


Figure 4A

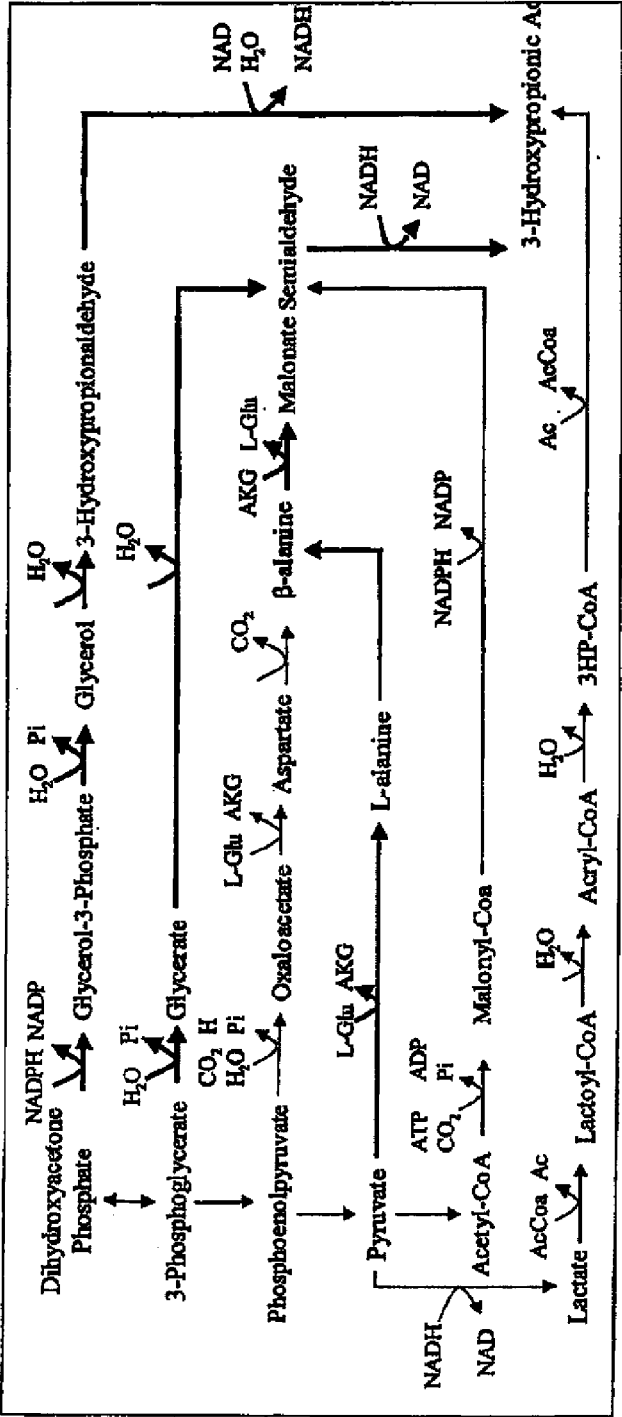


Figure 4B

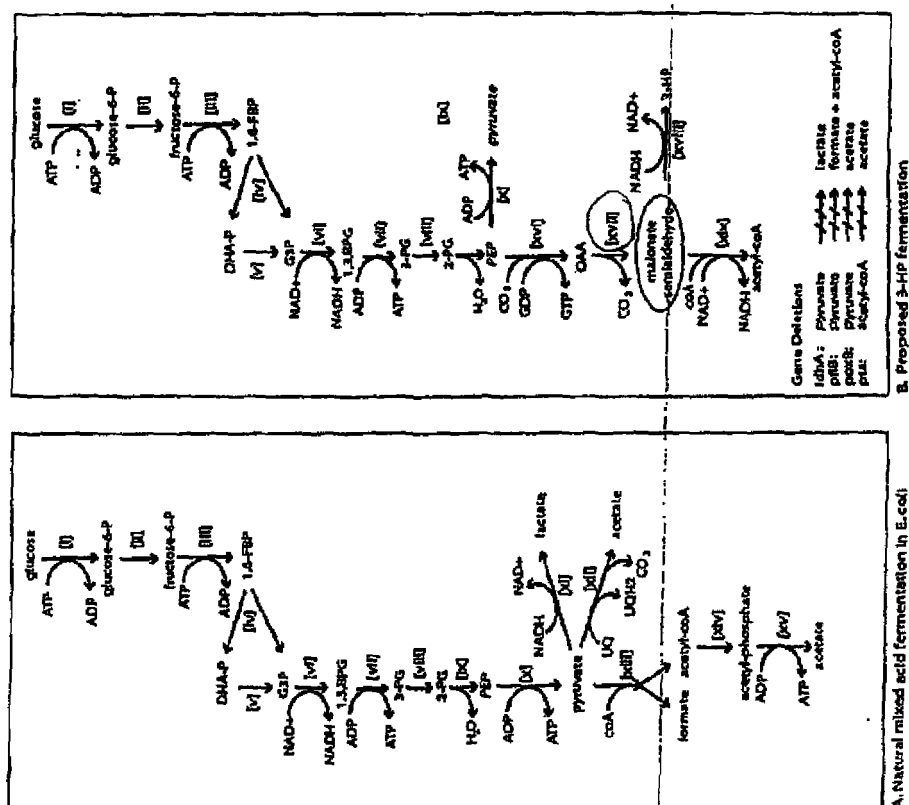


Figure 5

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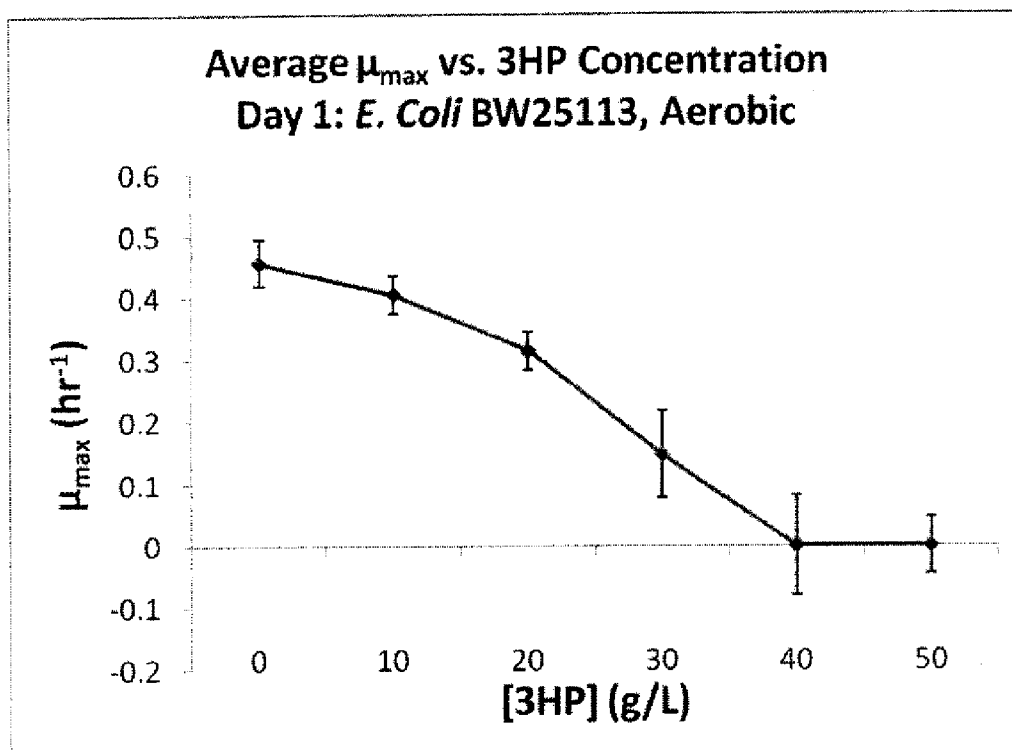


Figure 6A

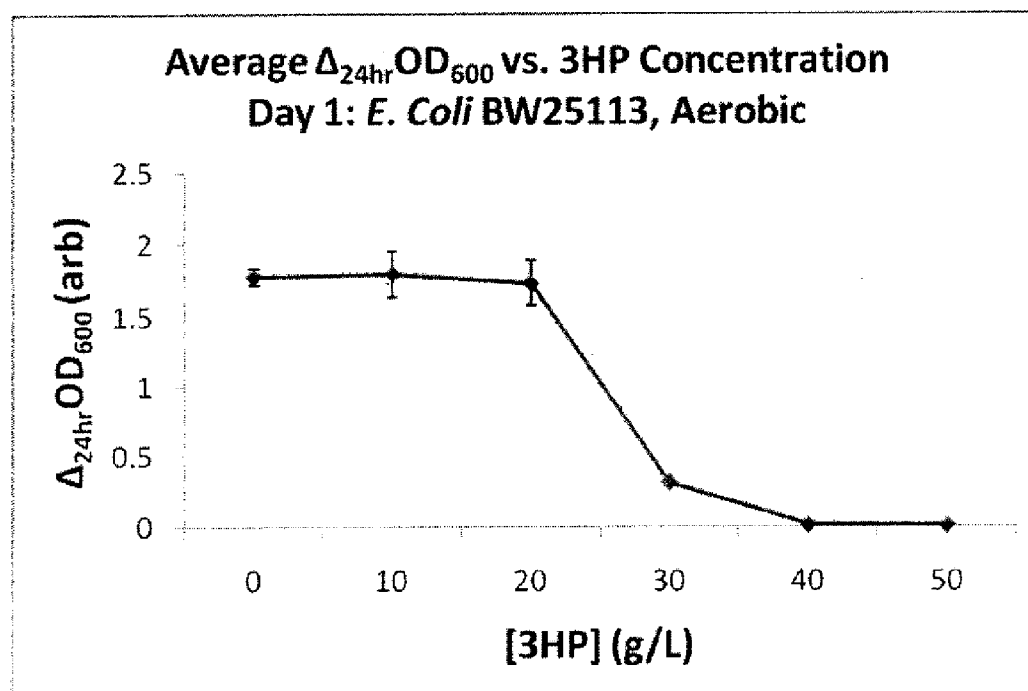


Figure 6B

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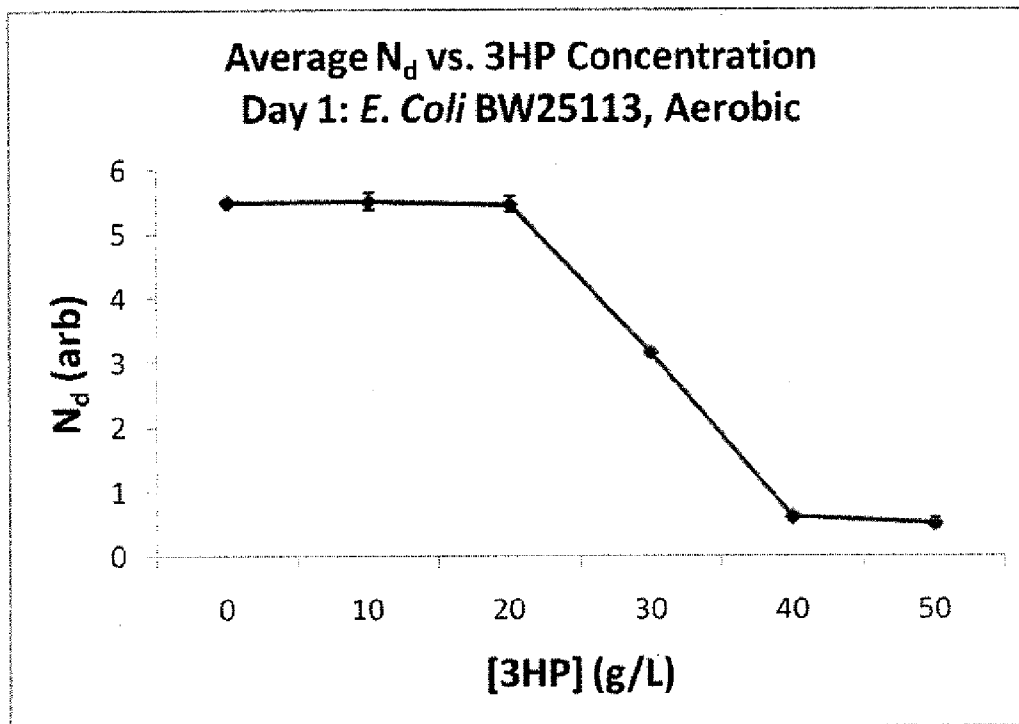


Figure 6C

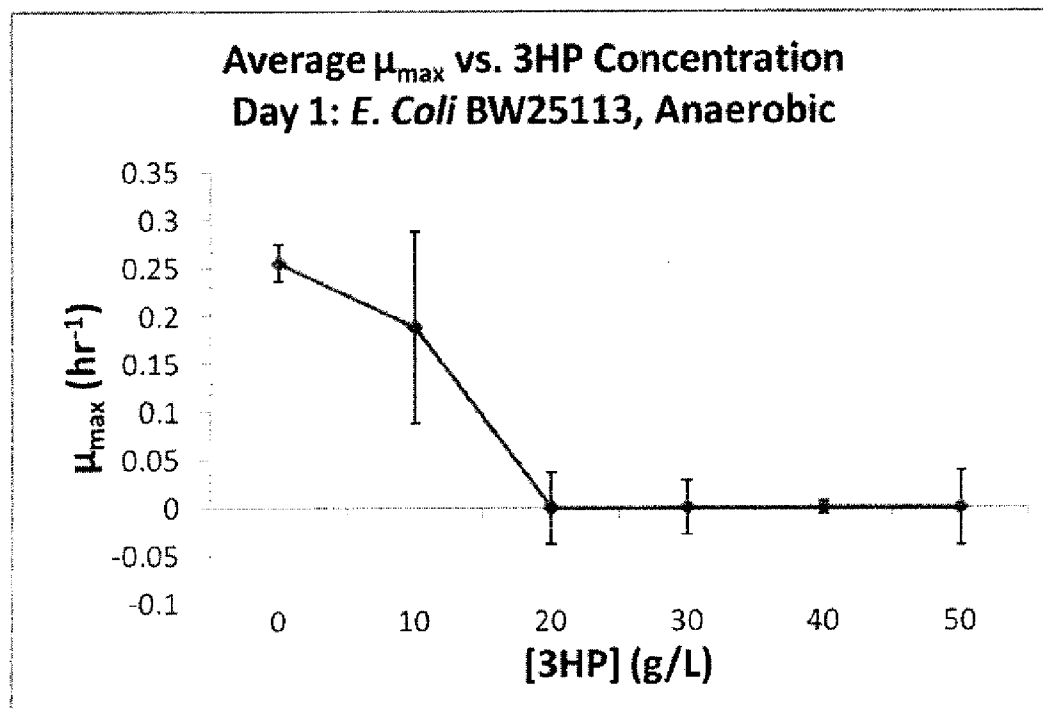


Figure 6D

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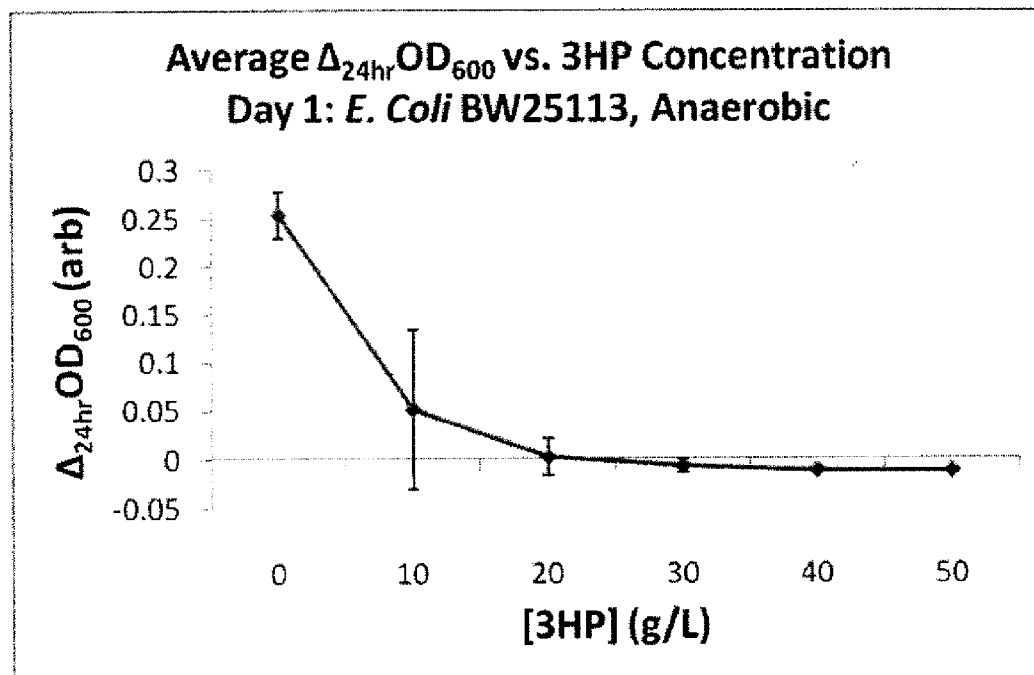


Figure 6E

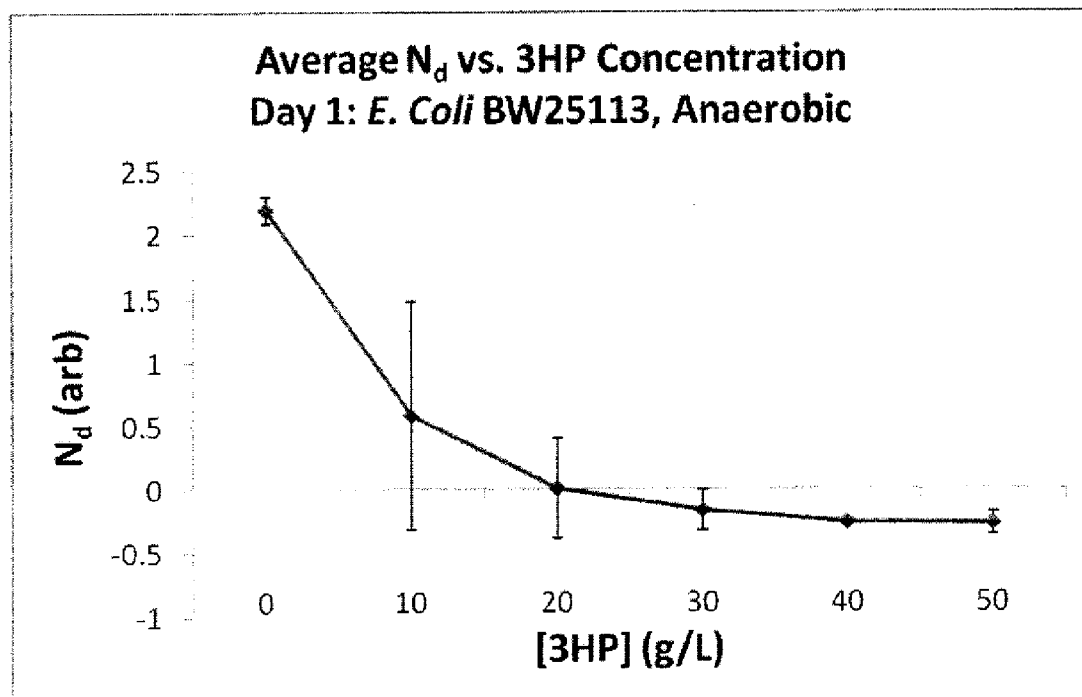


Figure 6F

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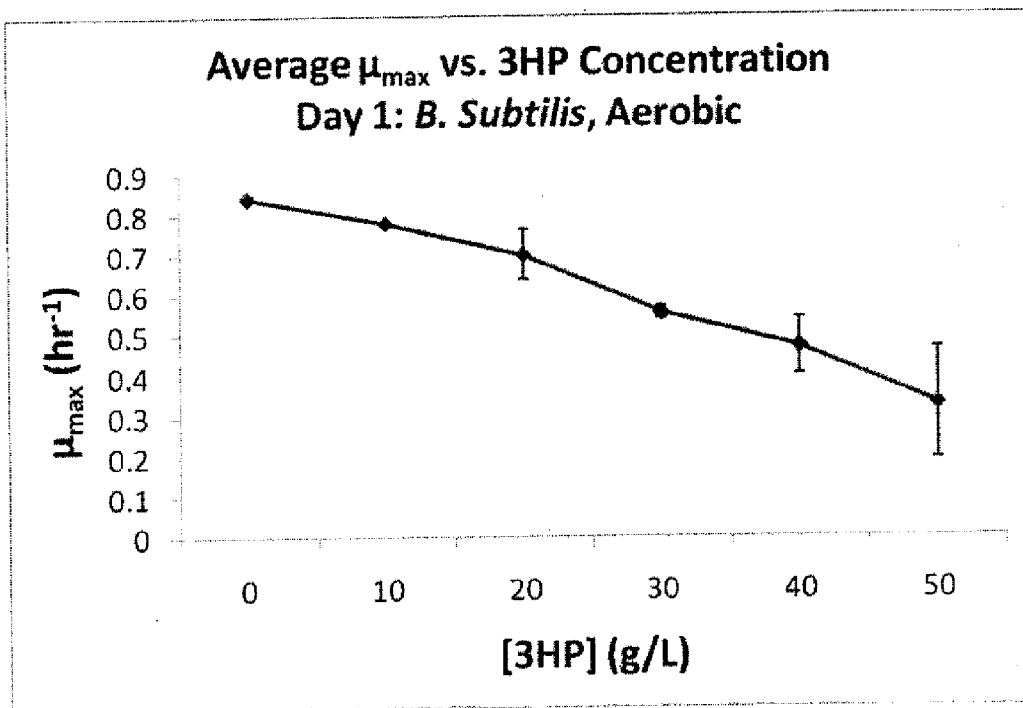


Figure 6G

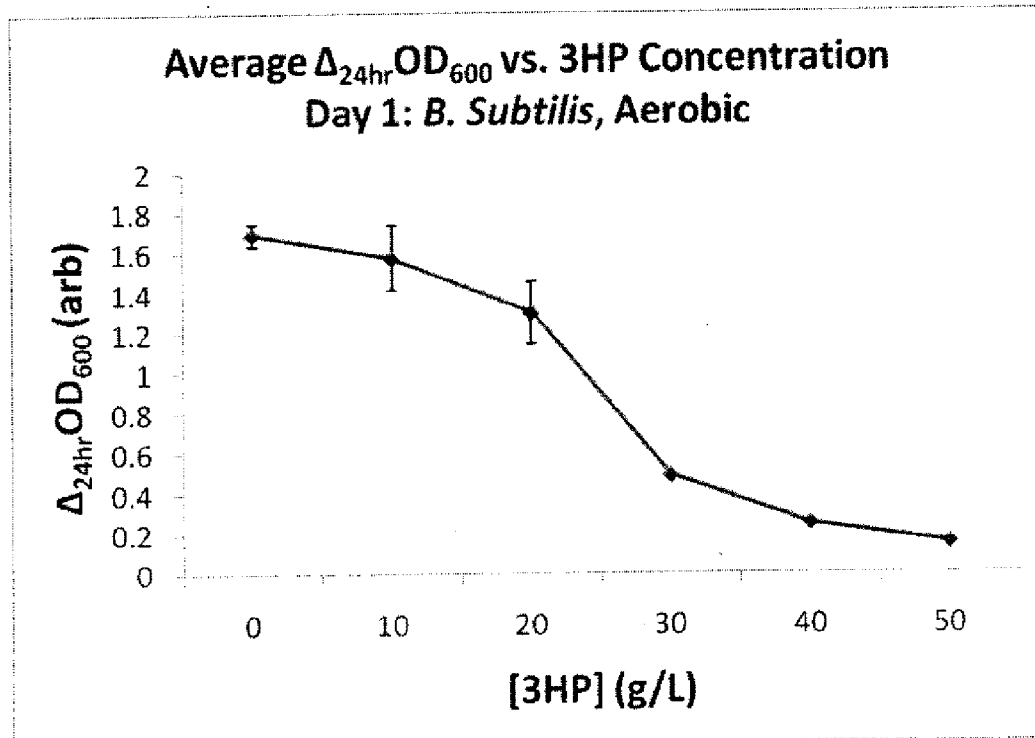


Figure 6H

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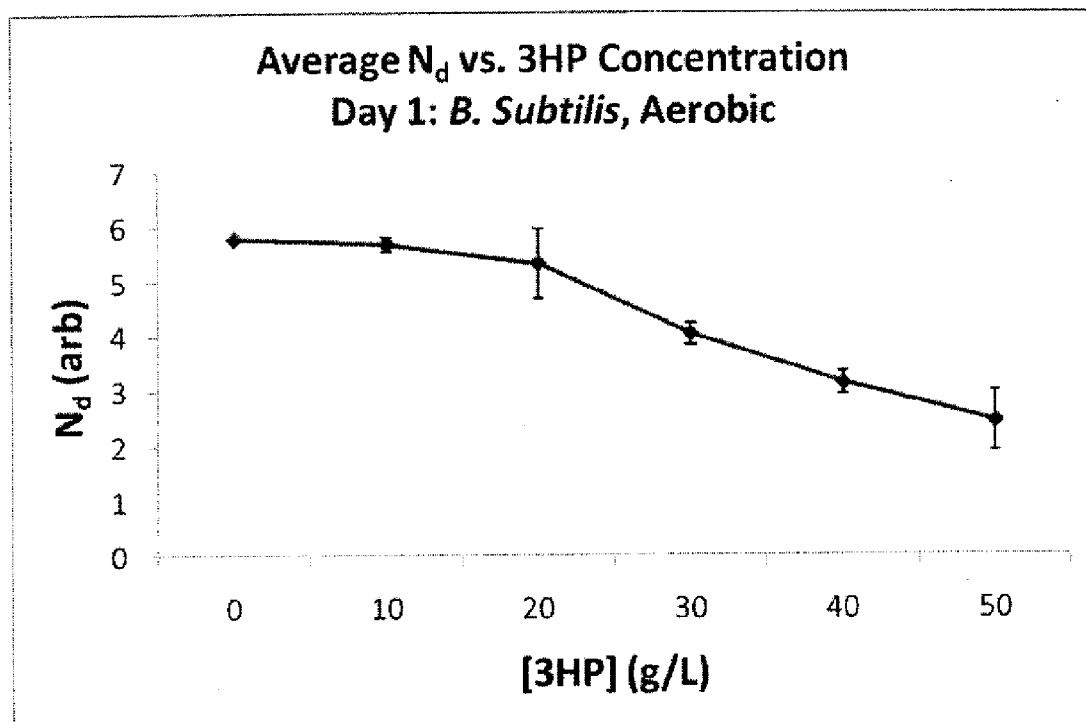


Figure 6I

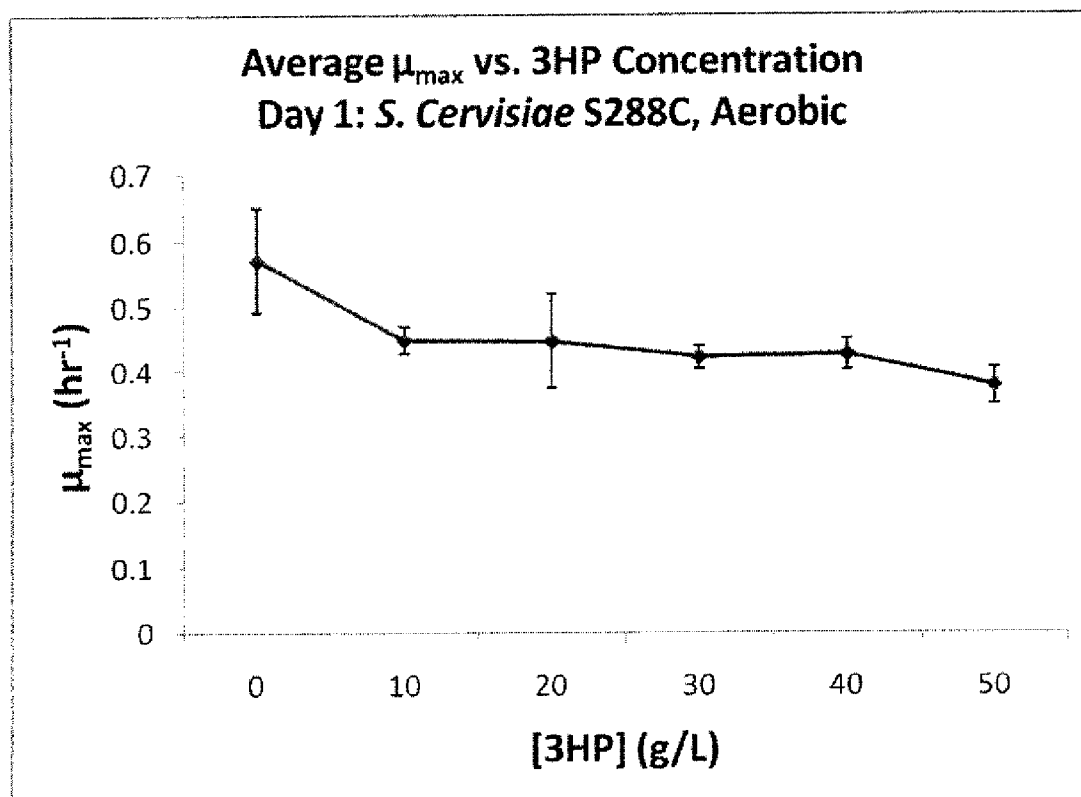


Figure 6J

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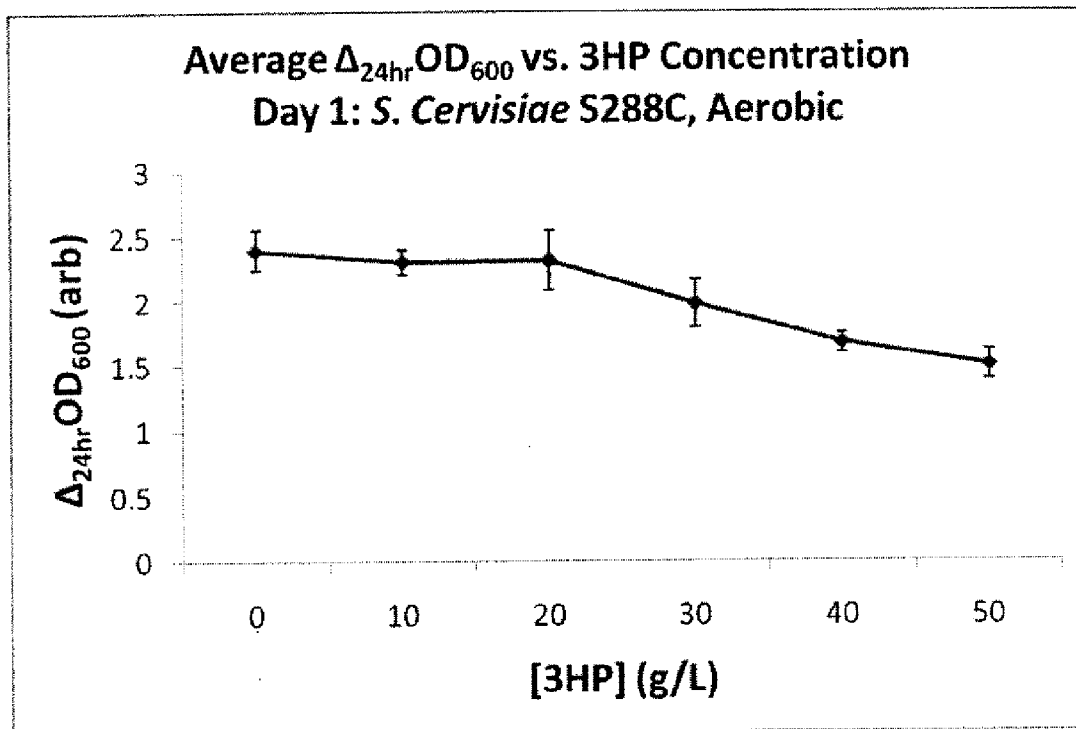


Figure 6K

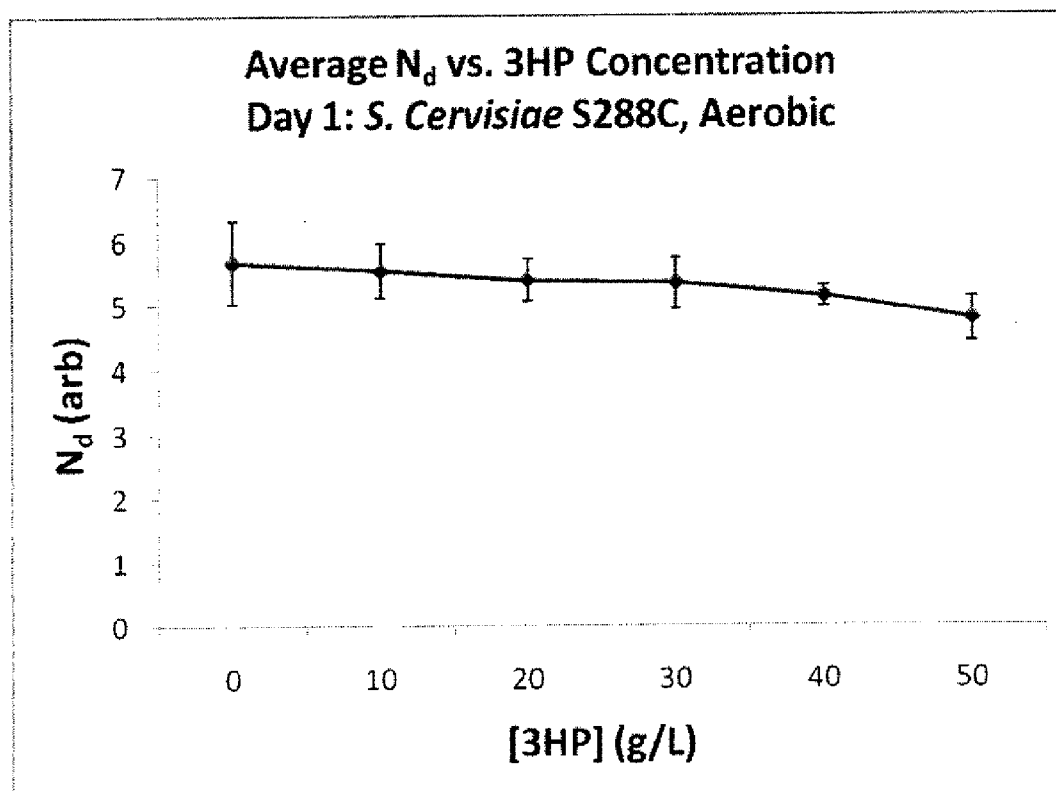


Figure 6L

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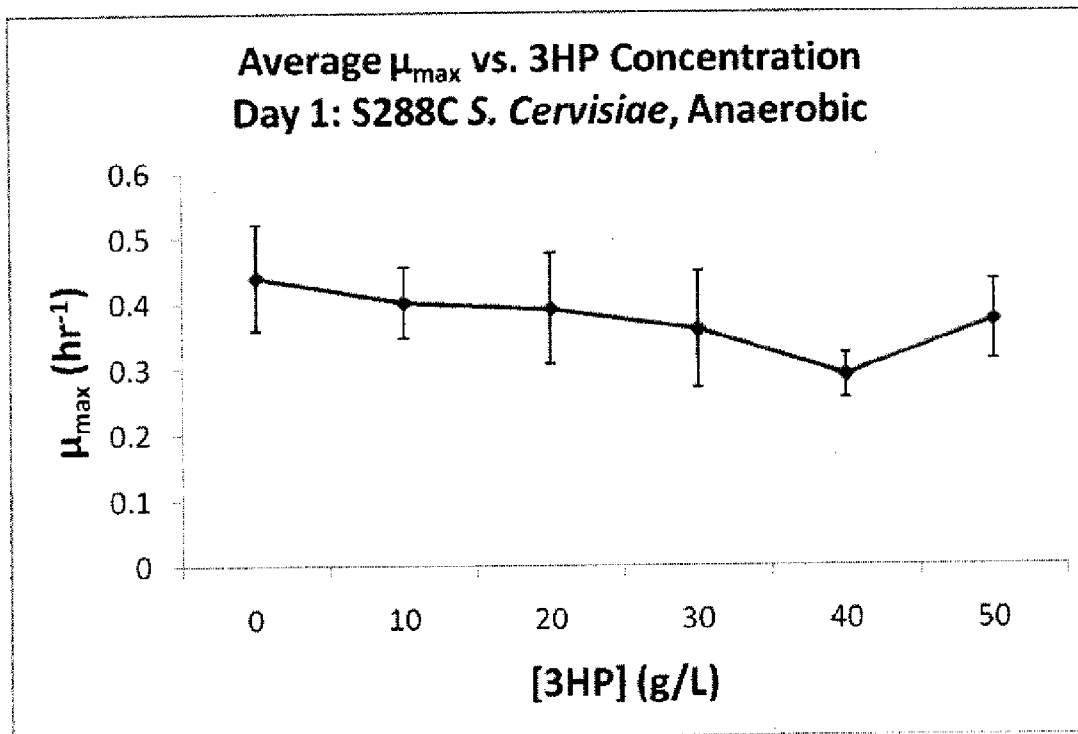


Figure 6M

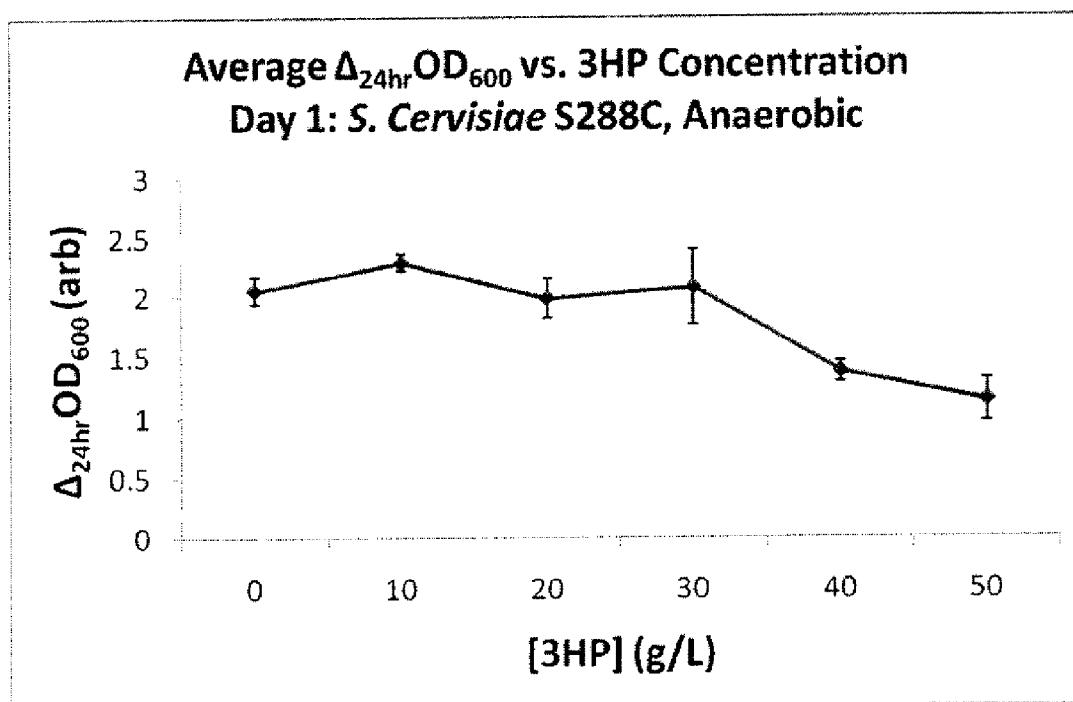


Figure 6N

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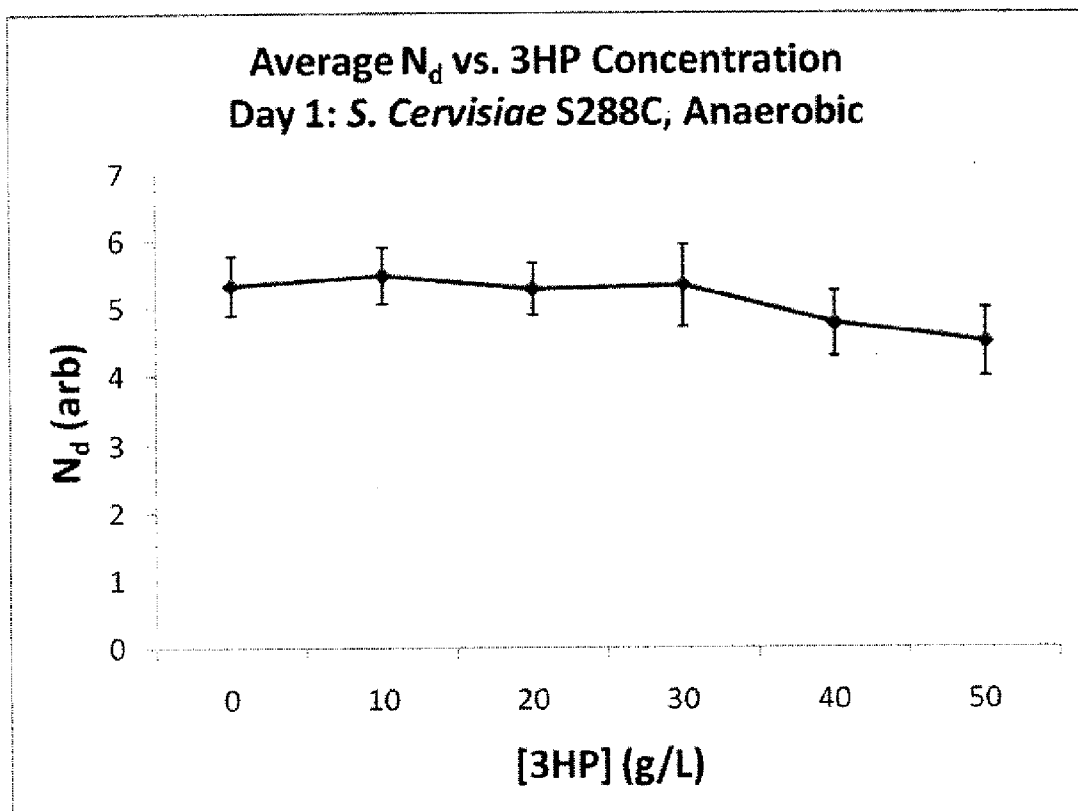


Figure 6O

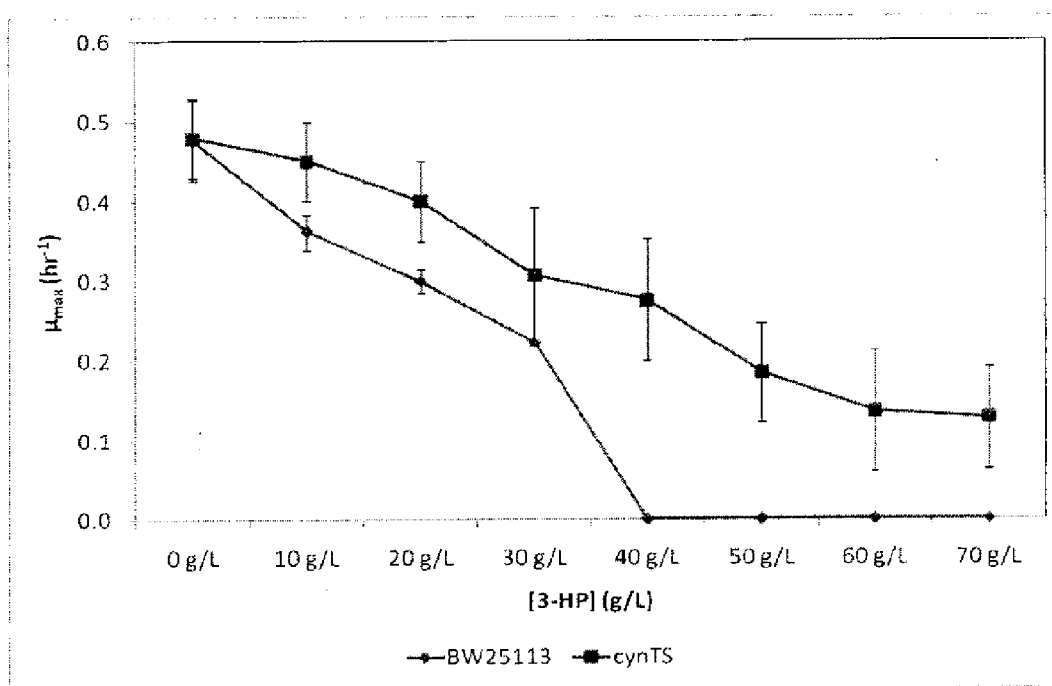


Figure 6P

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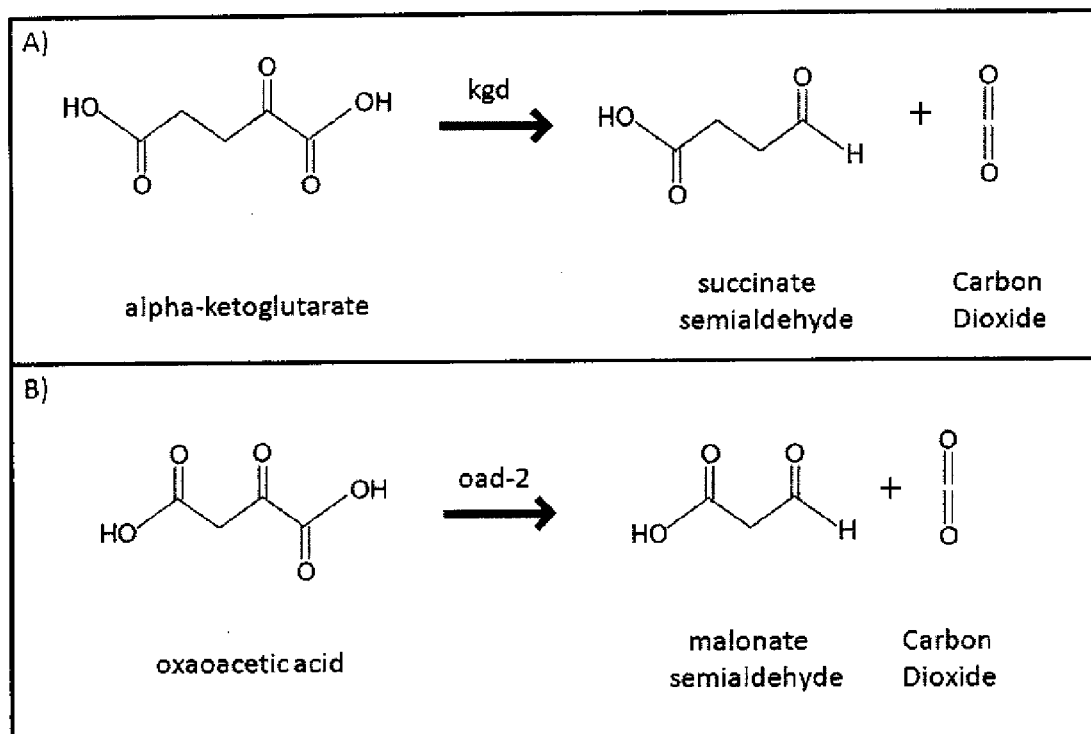
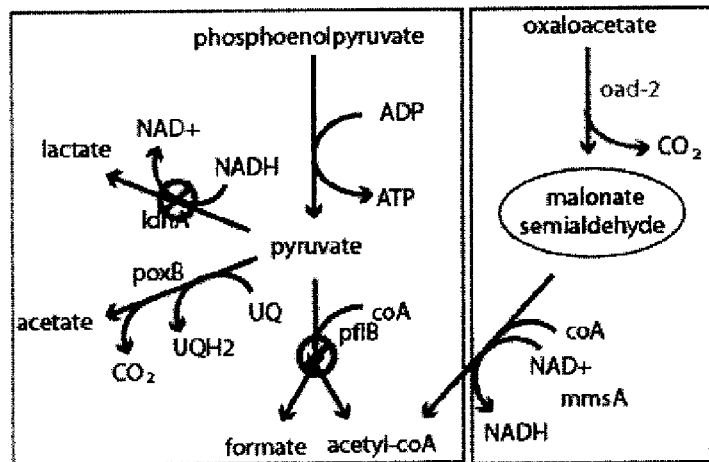


Figure 7

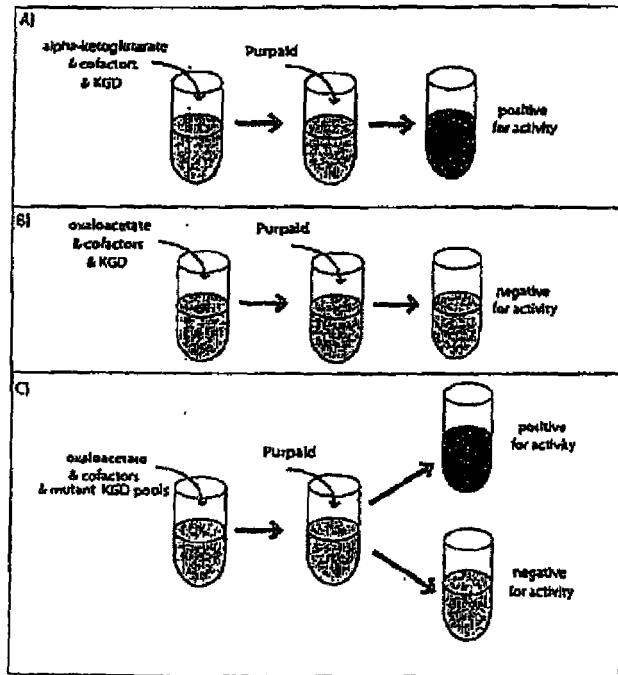


Growth

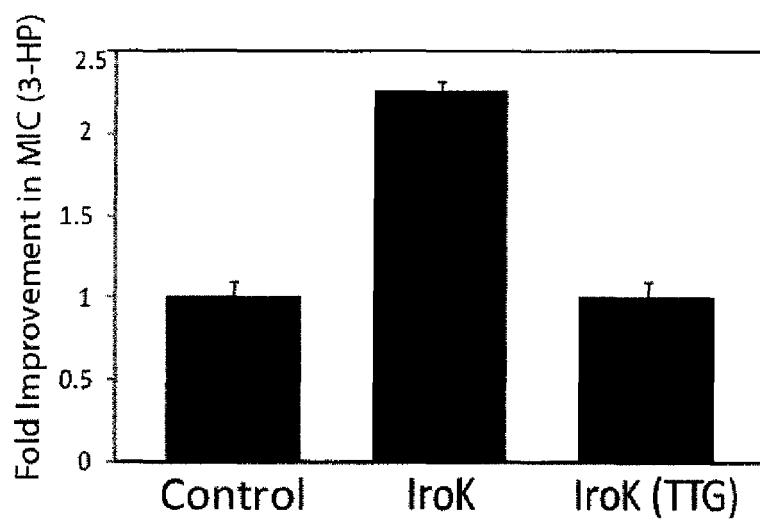
Figure 8

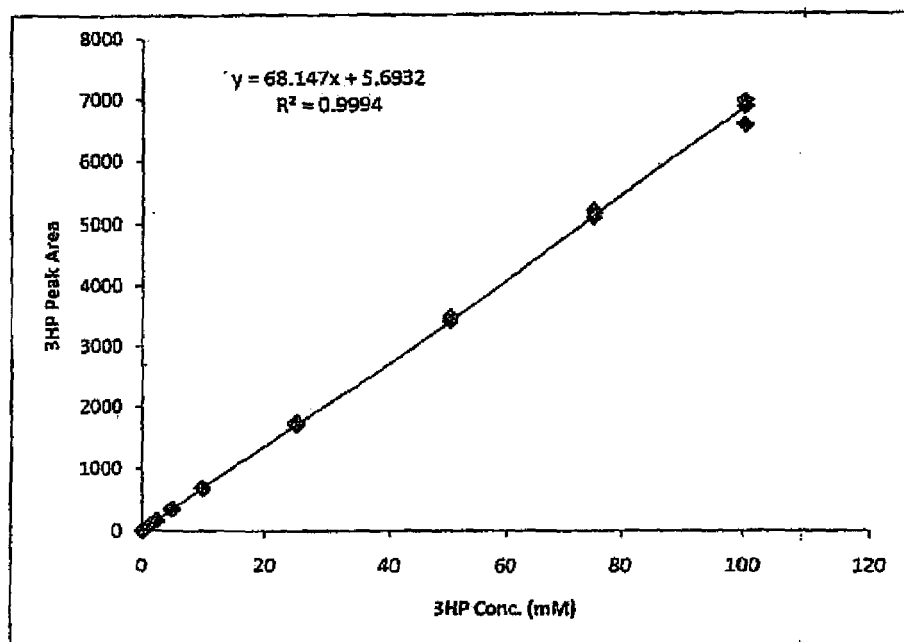
	Minimal Media
E.coli AB354	 no growth
E.coli AB354 + gabT	 no growth
E.coli AB354 + gabT + kgd	 no growth
E.coli AB354 + gabT + mutant kgd pools	 positive clones grow

Figure 9

**Figure 10**

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**Figure 11**

**Figure 12**

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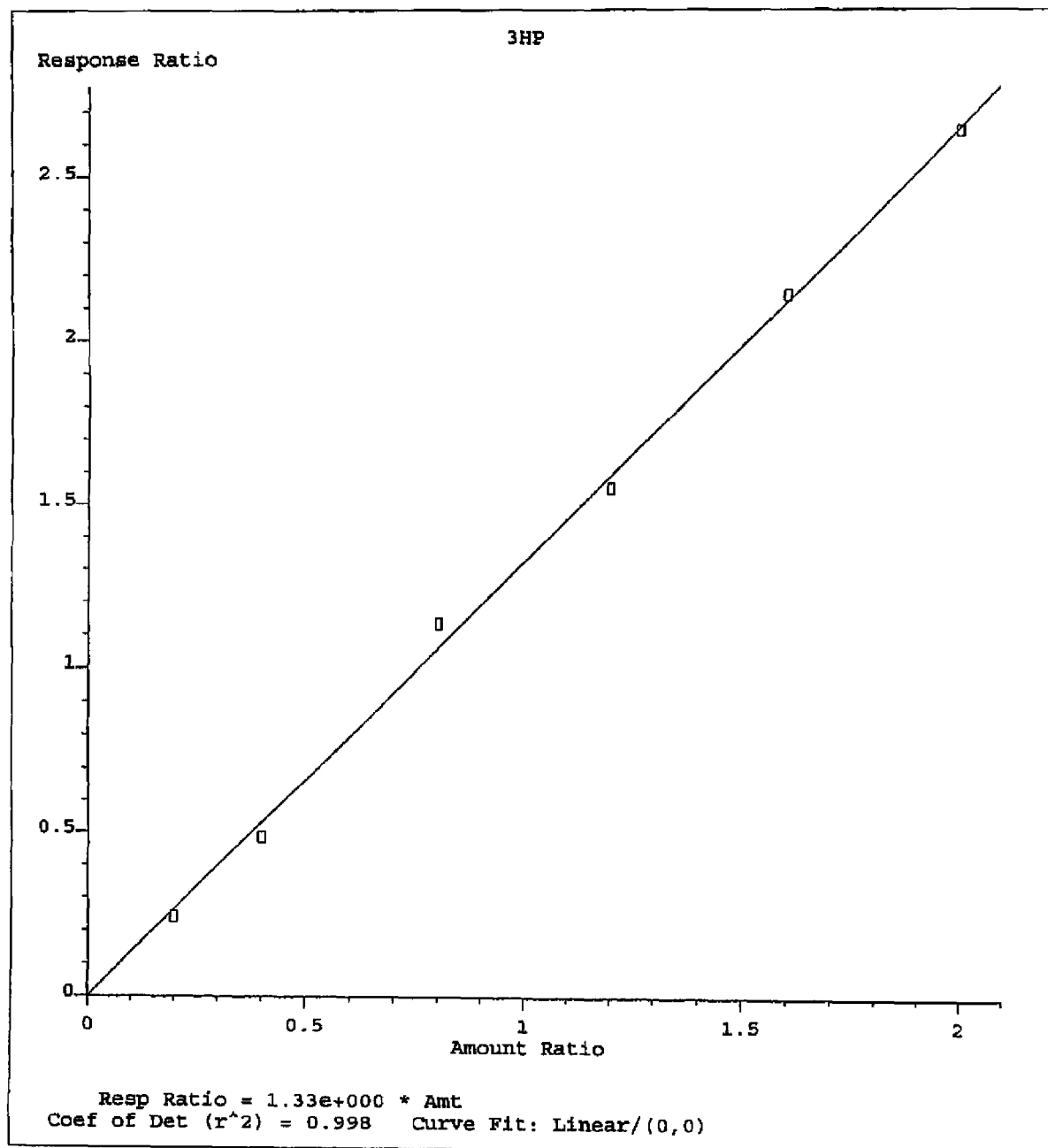


Figure 13