

Figure 1

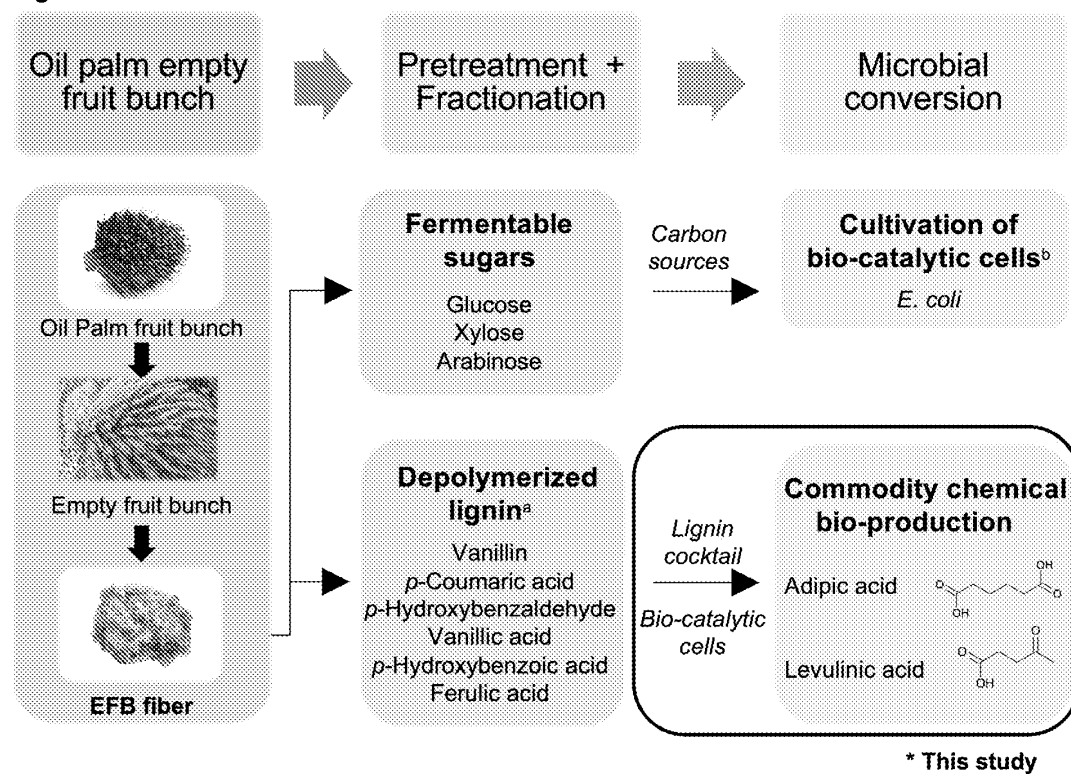
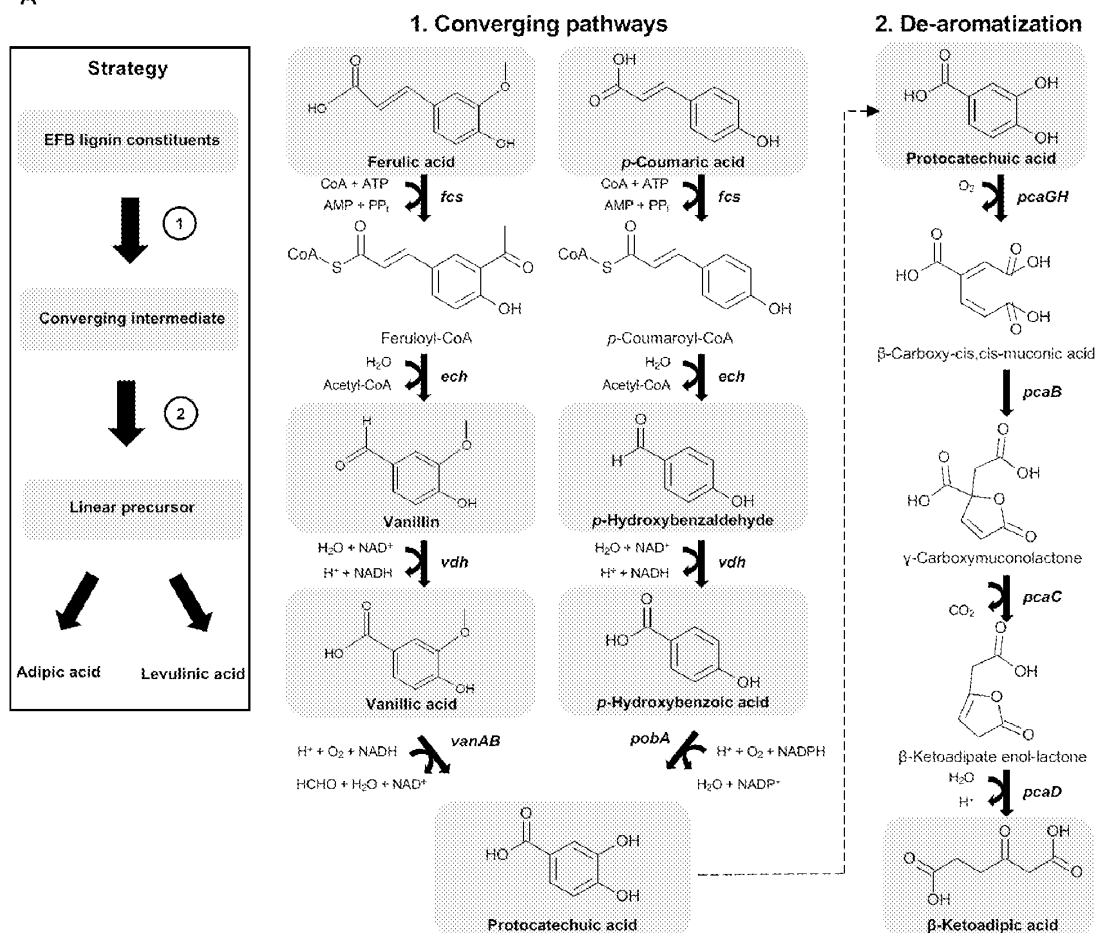


Figure 2

A



B

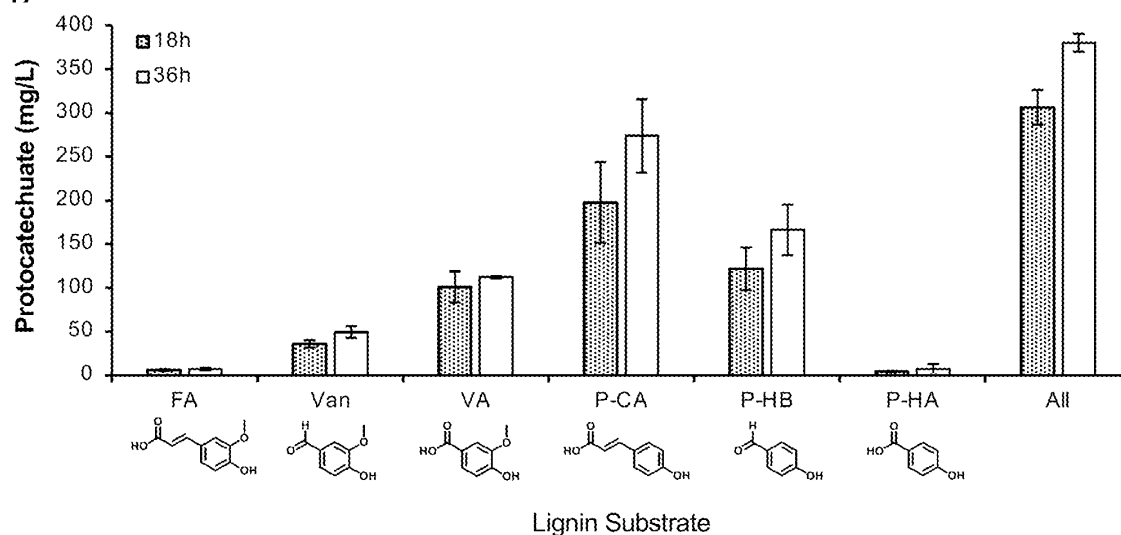


Figure 3

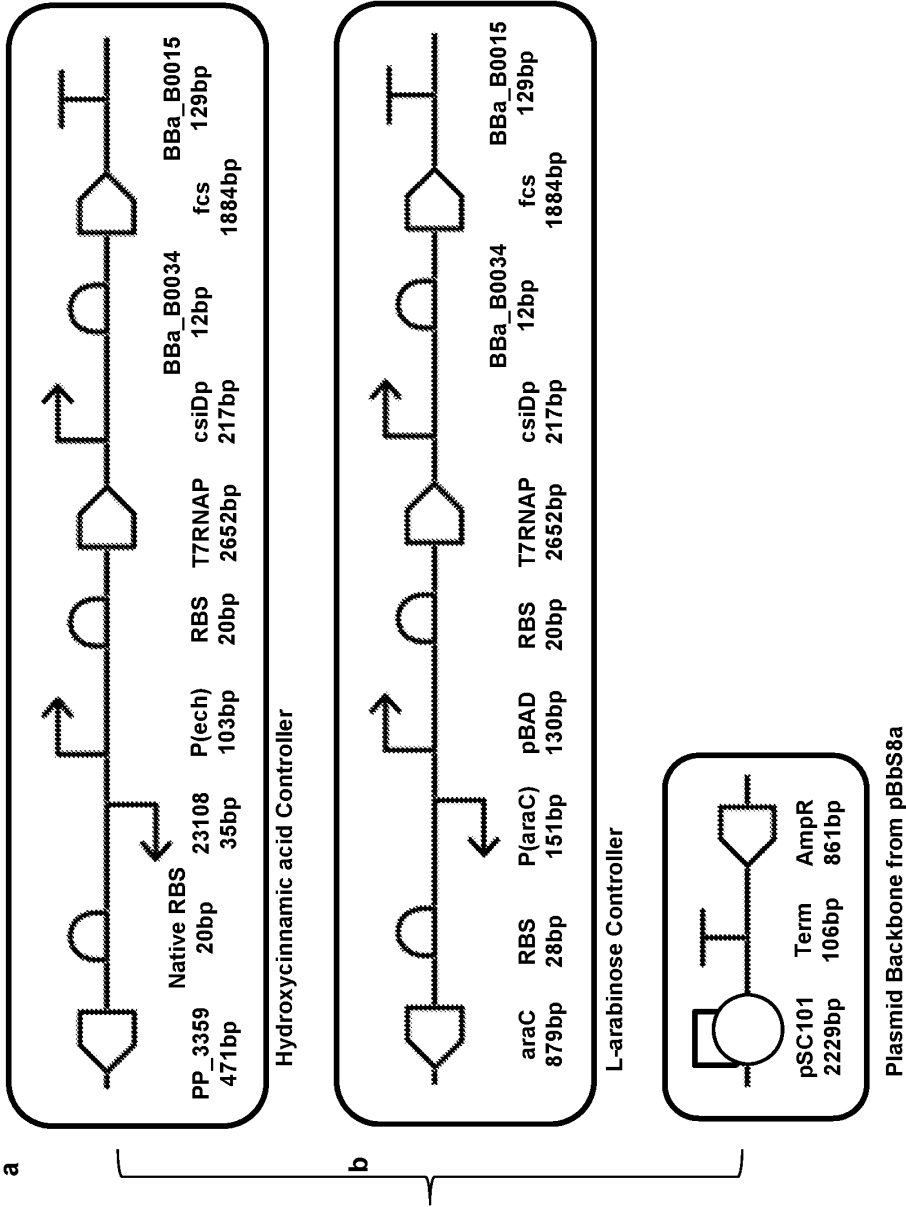


Figure 3 (continued)

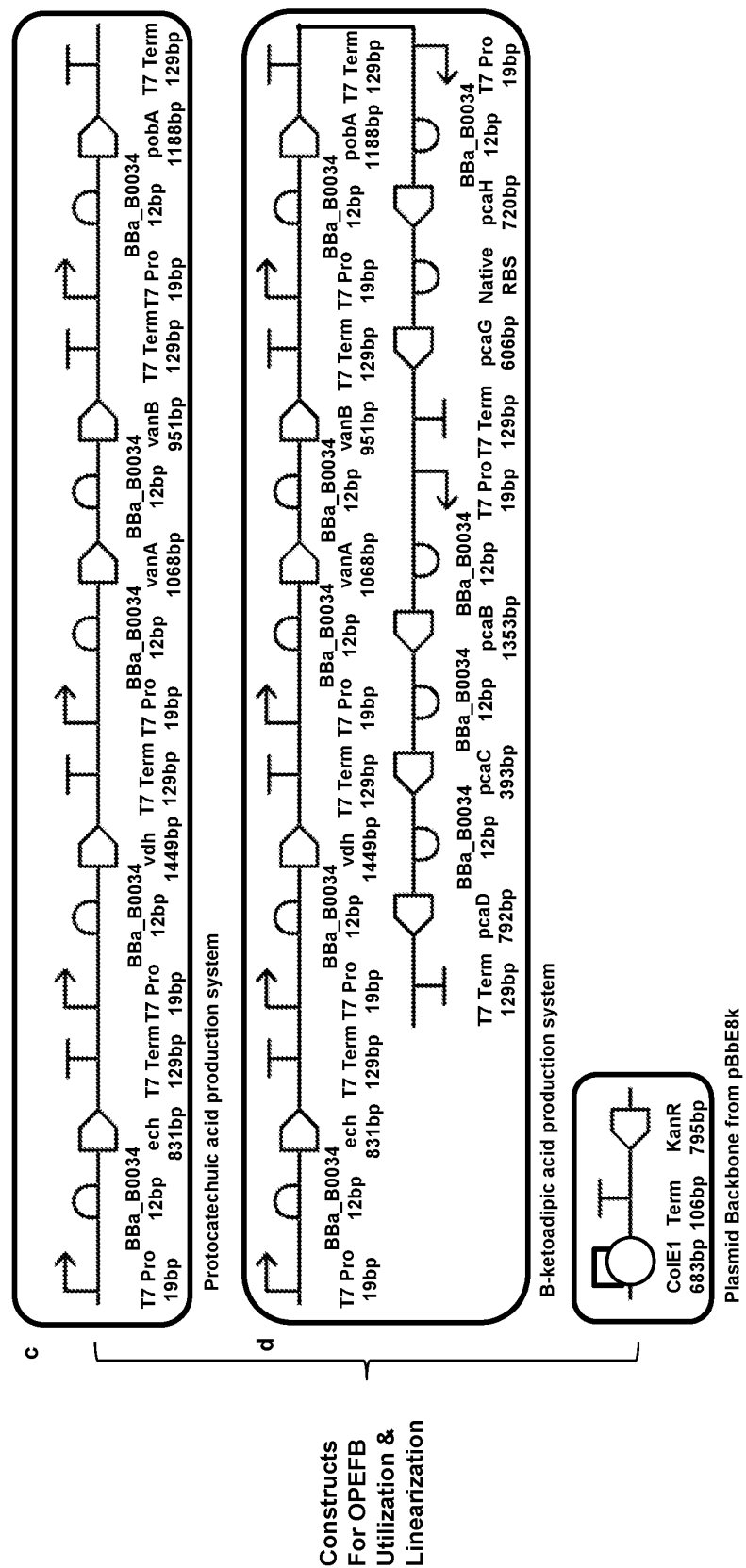


Figure 3 (continued)

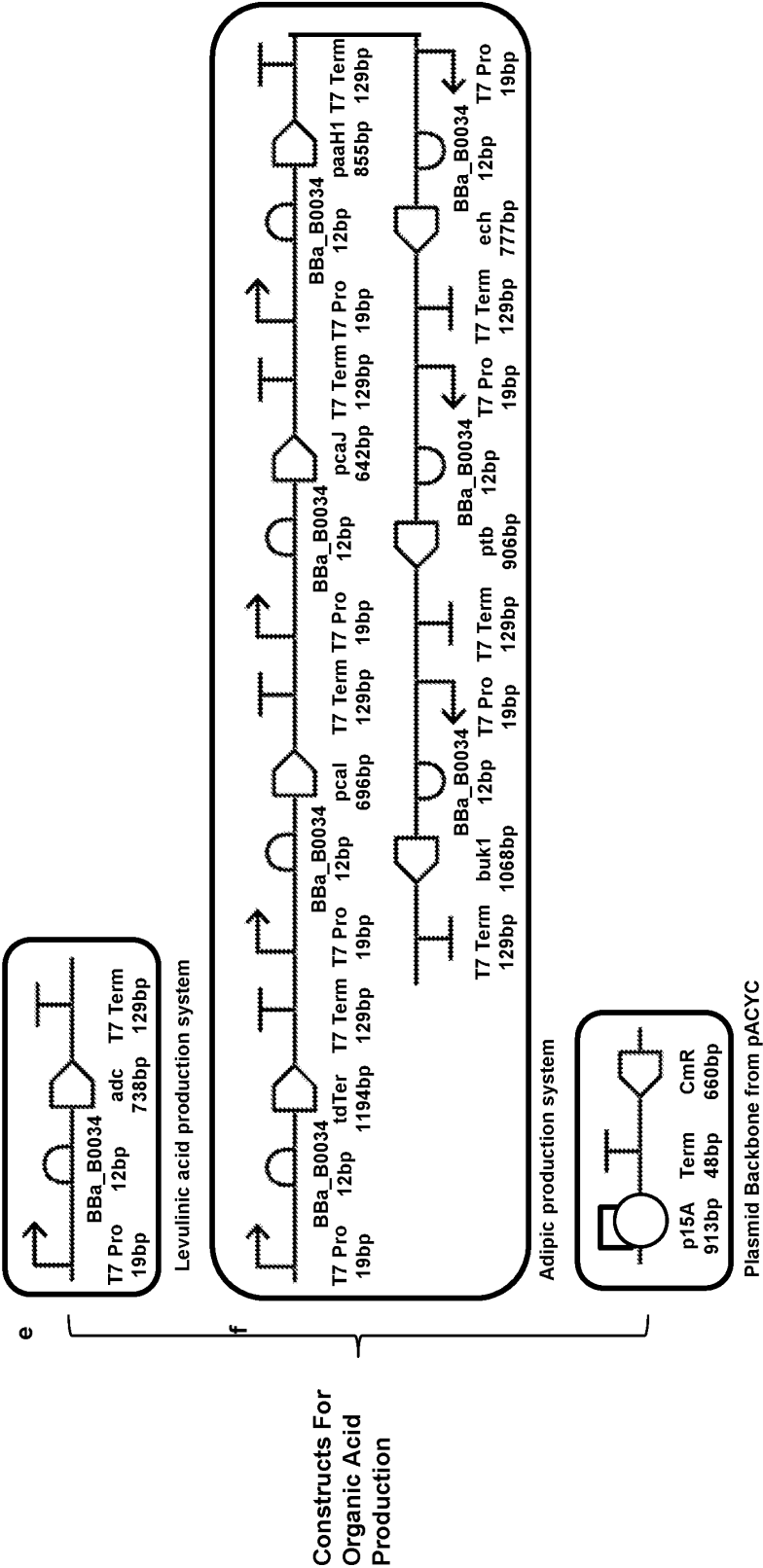
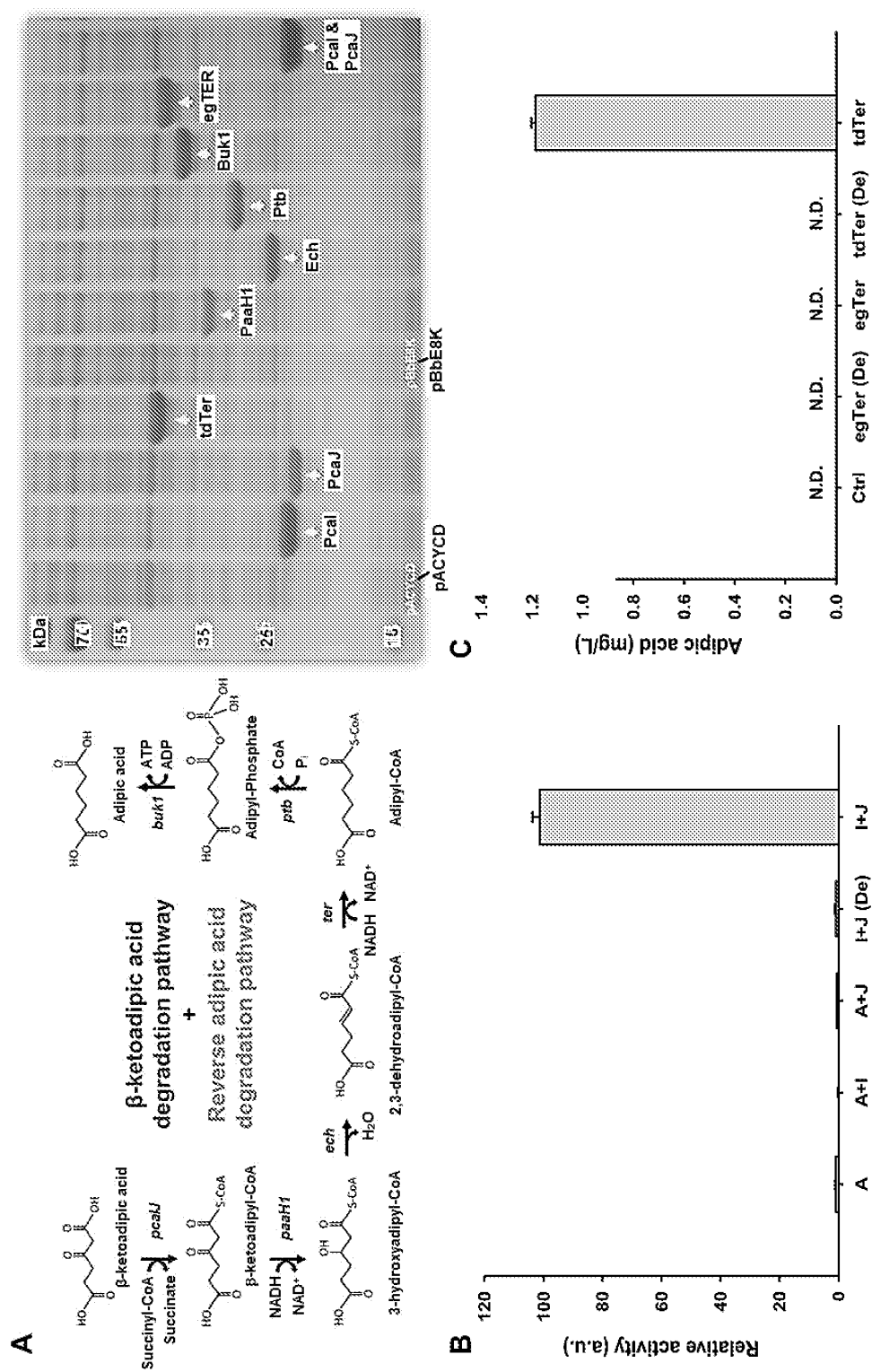
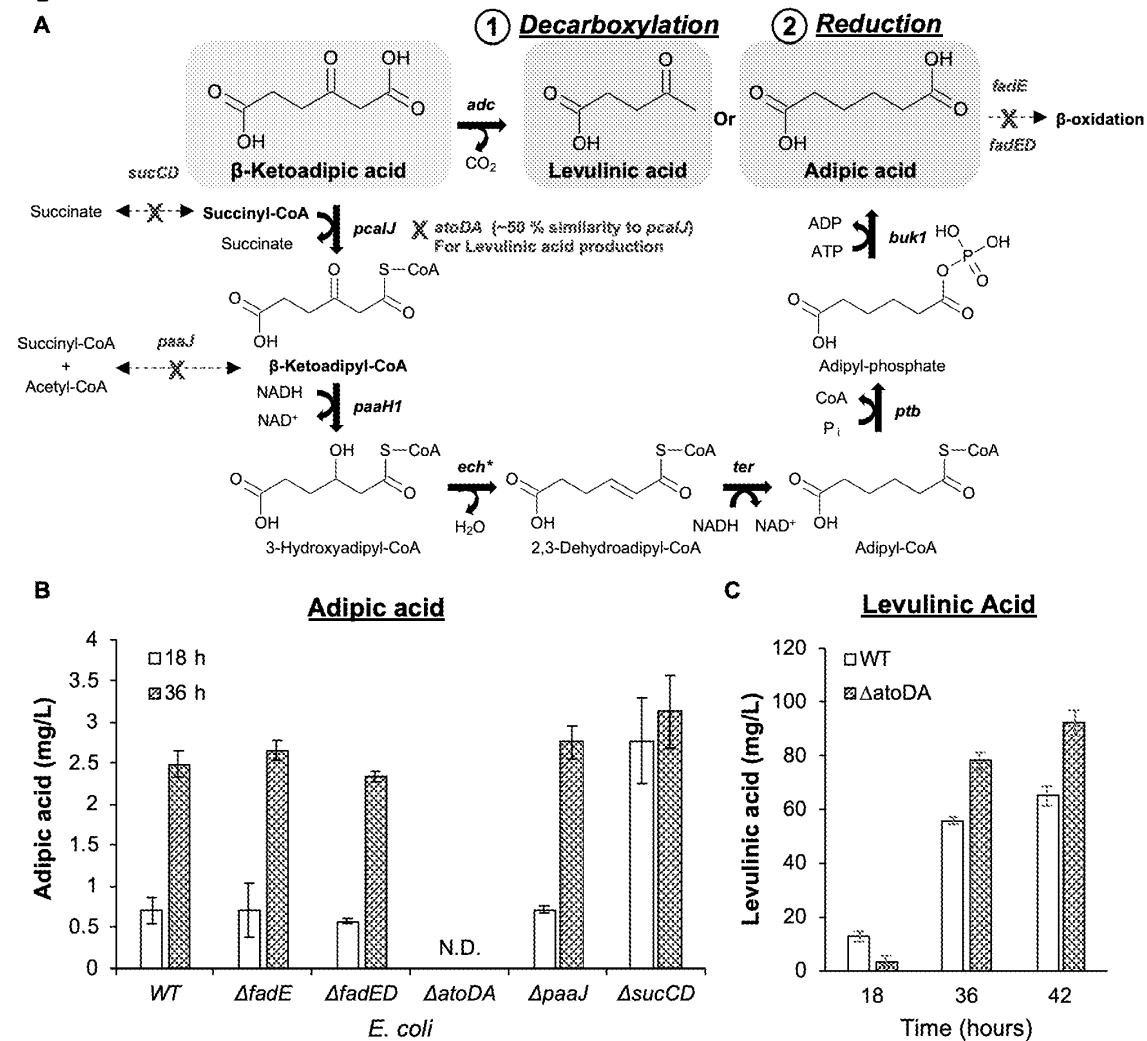


Figure 4



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Figure 5



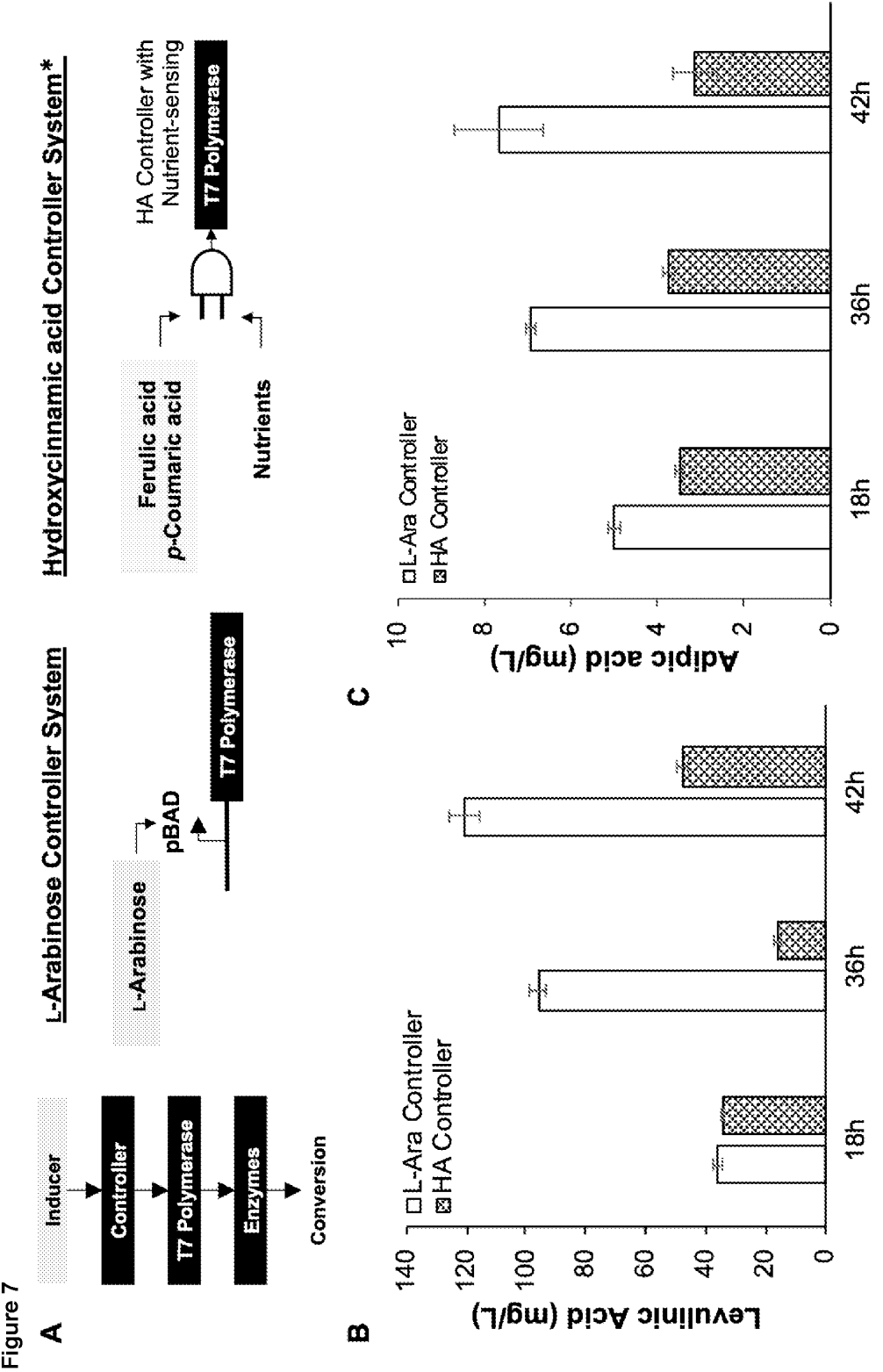


Figure 8

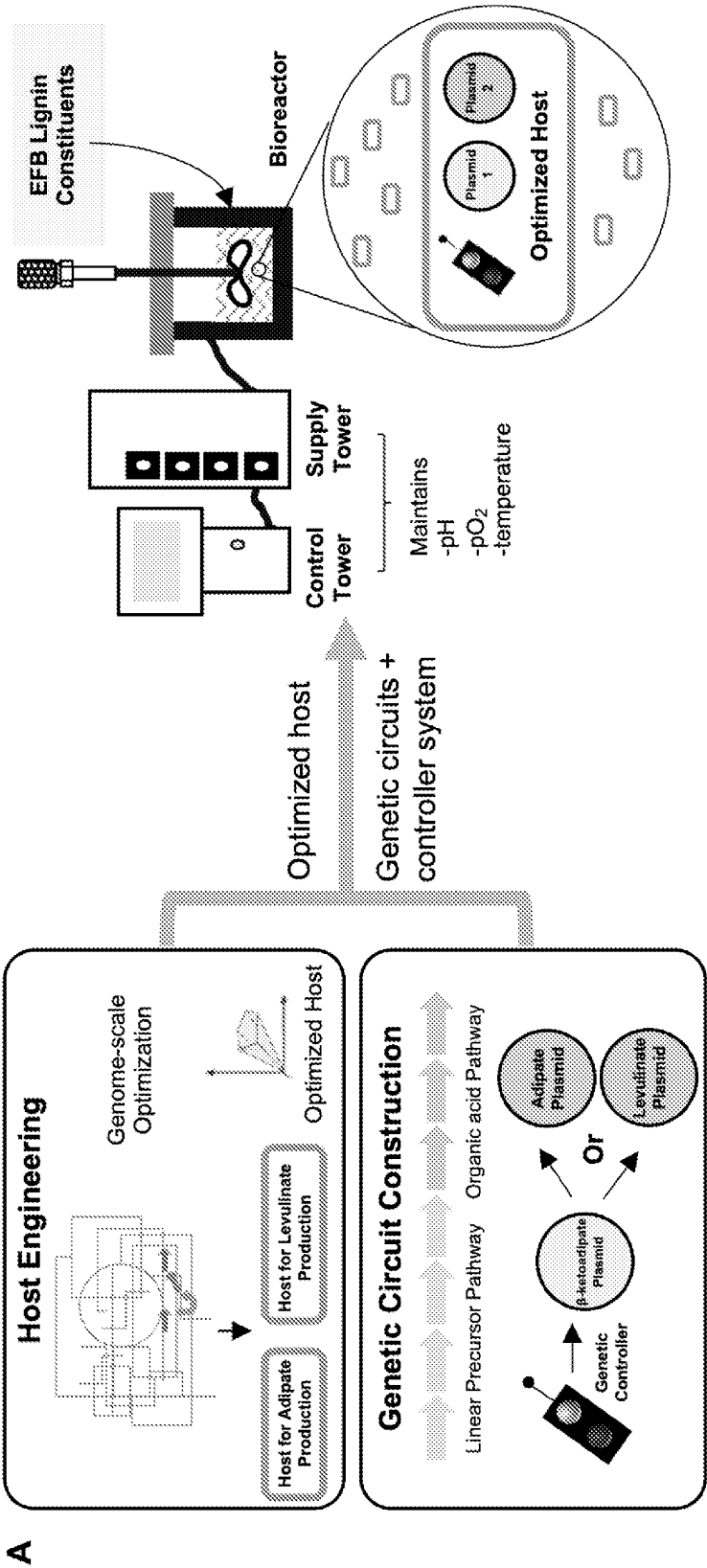




Figure 9

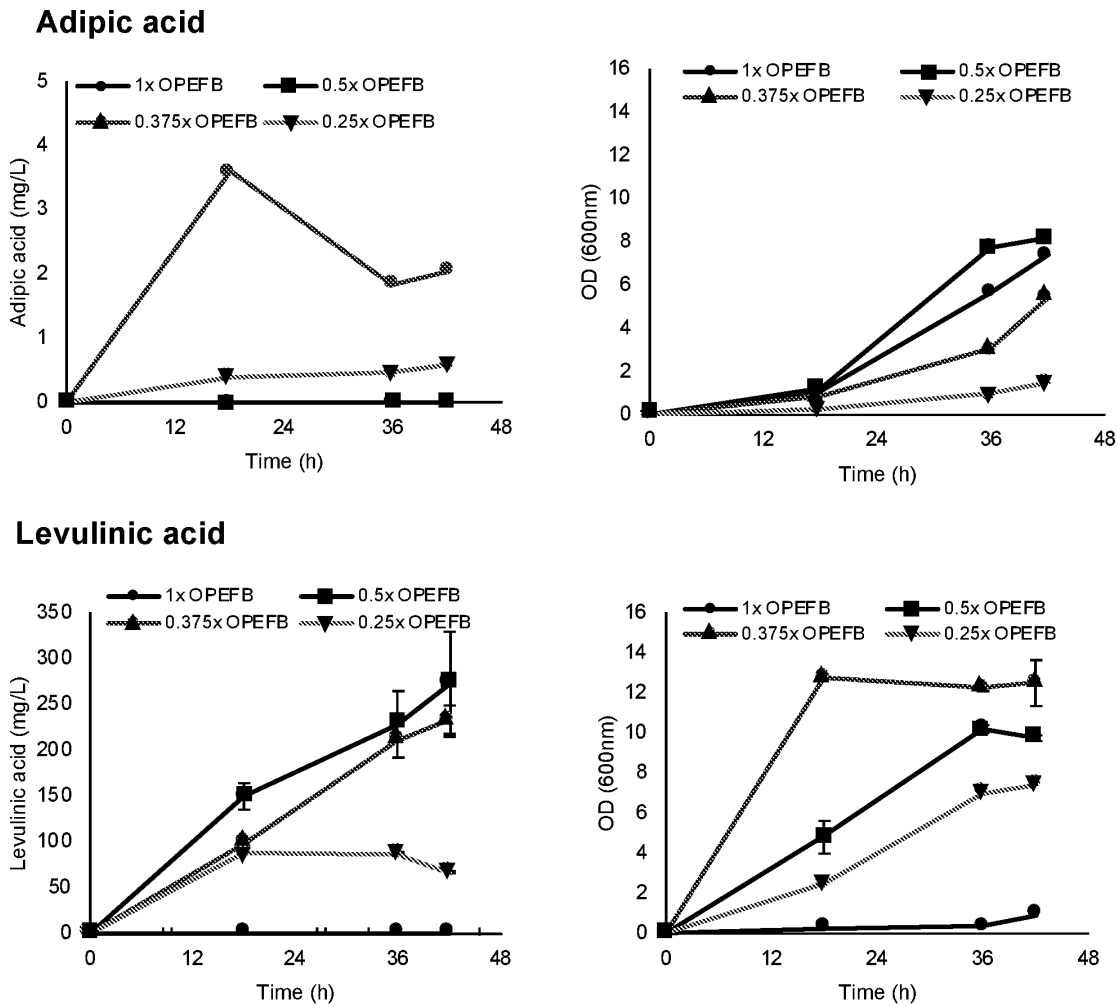


Figure 10

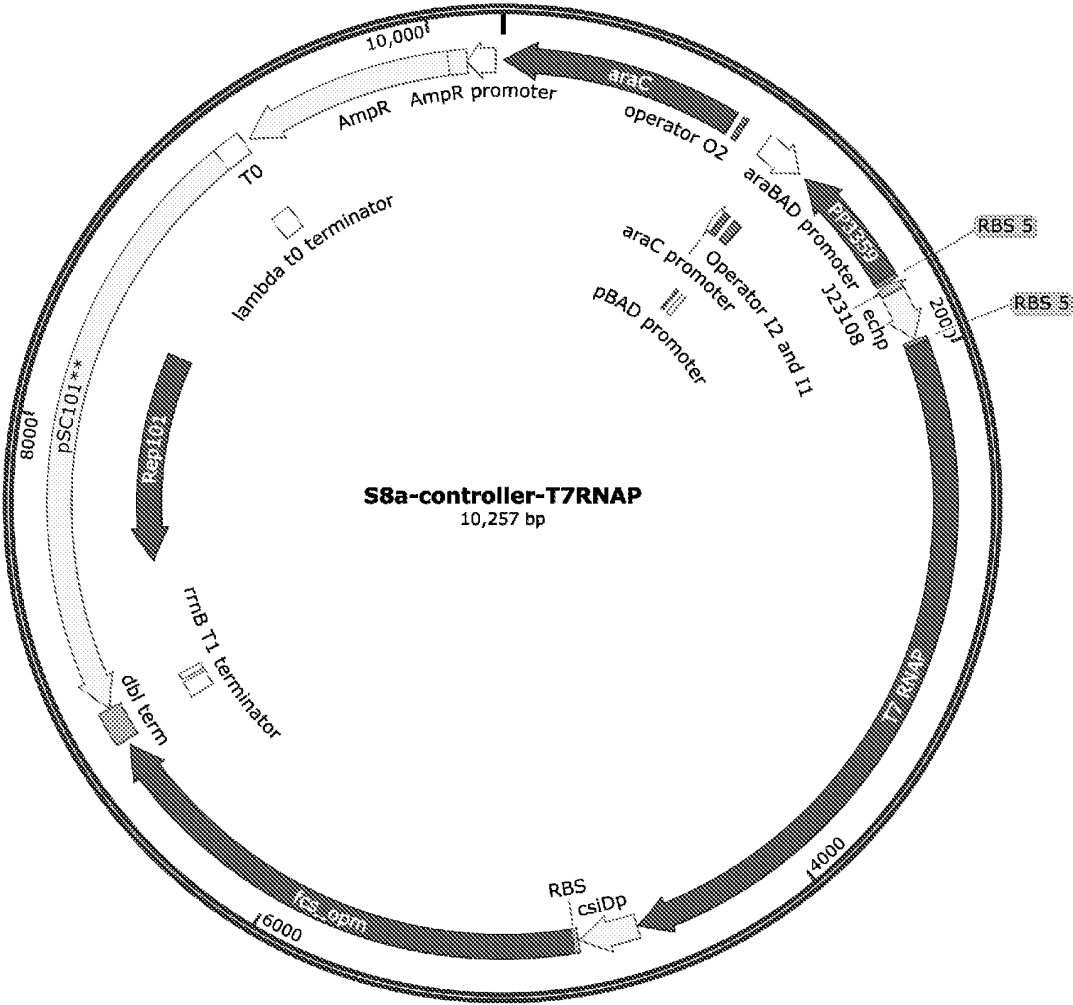


Figure 11

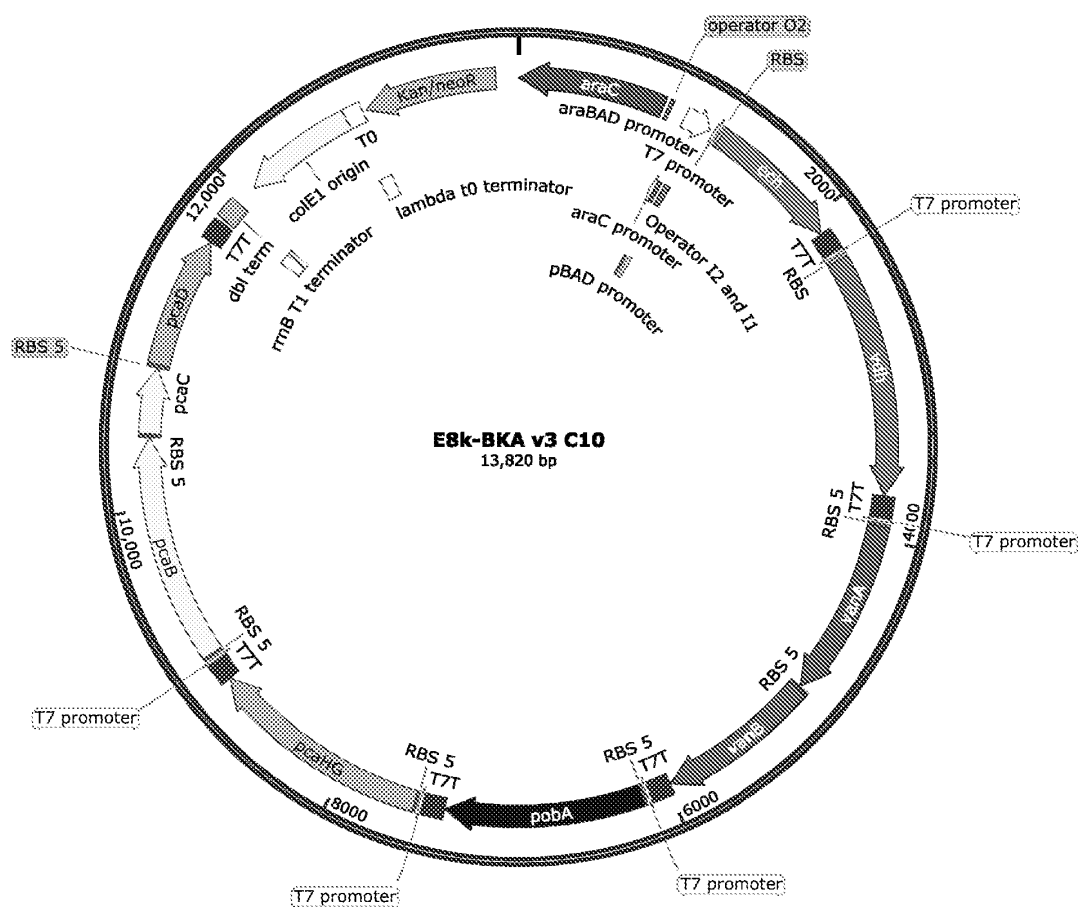


Figure 12

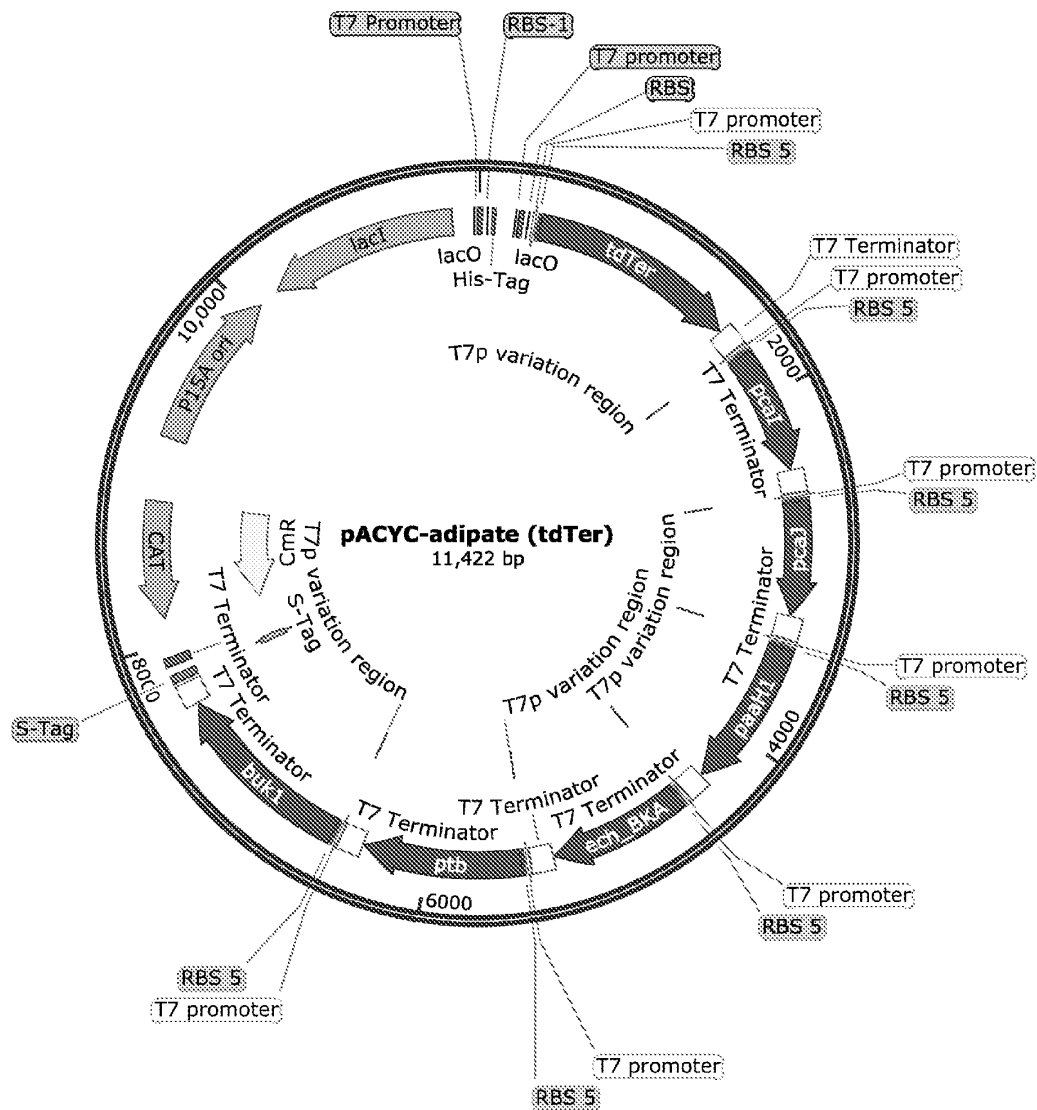


Figure 13

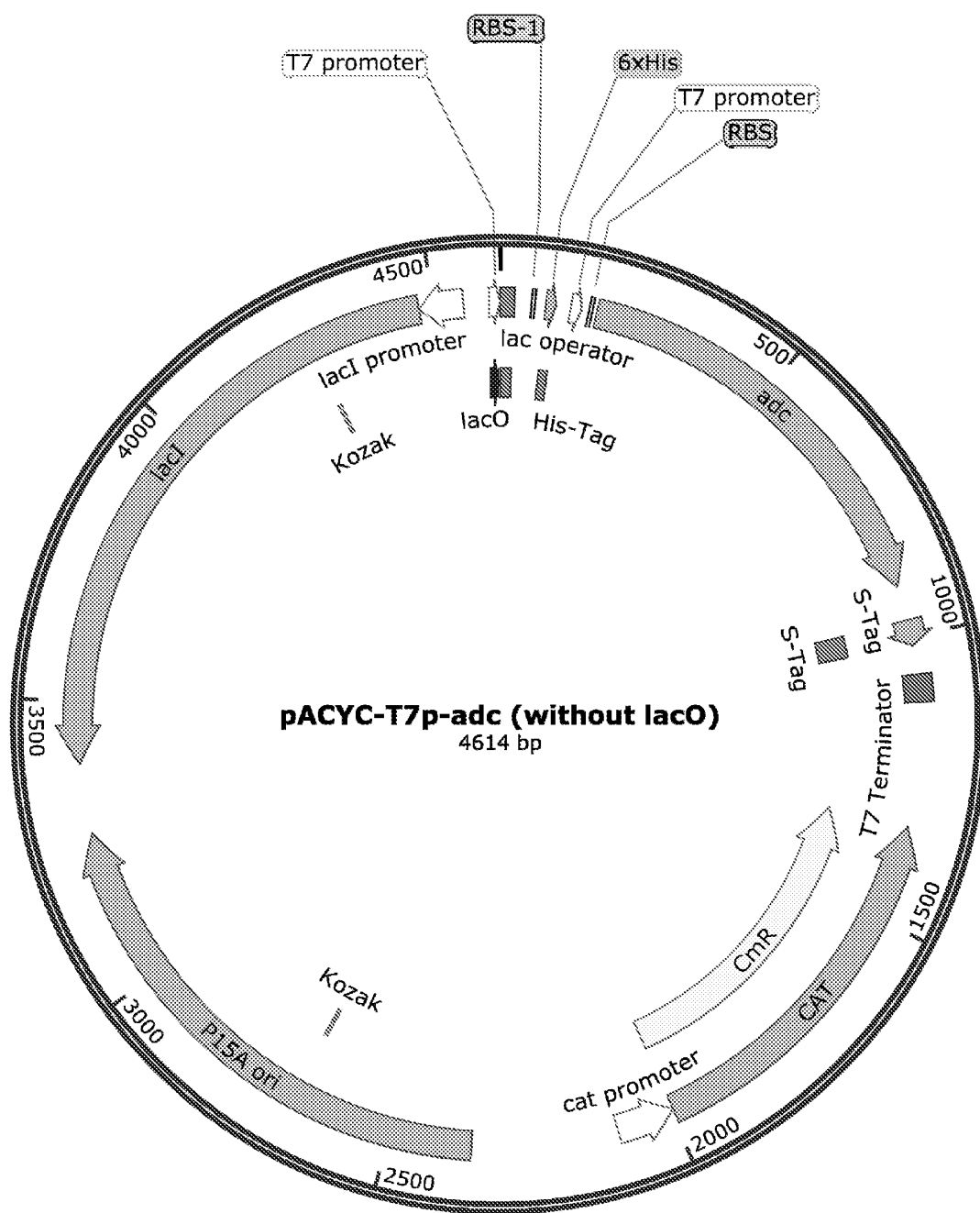
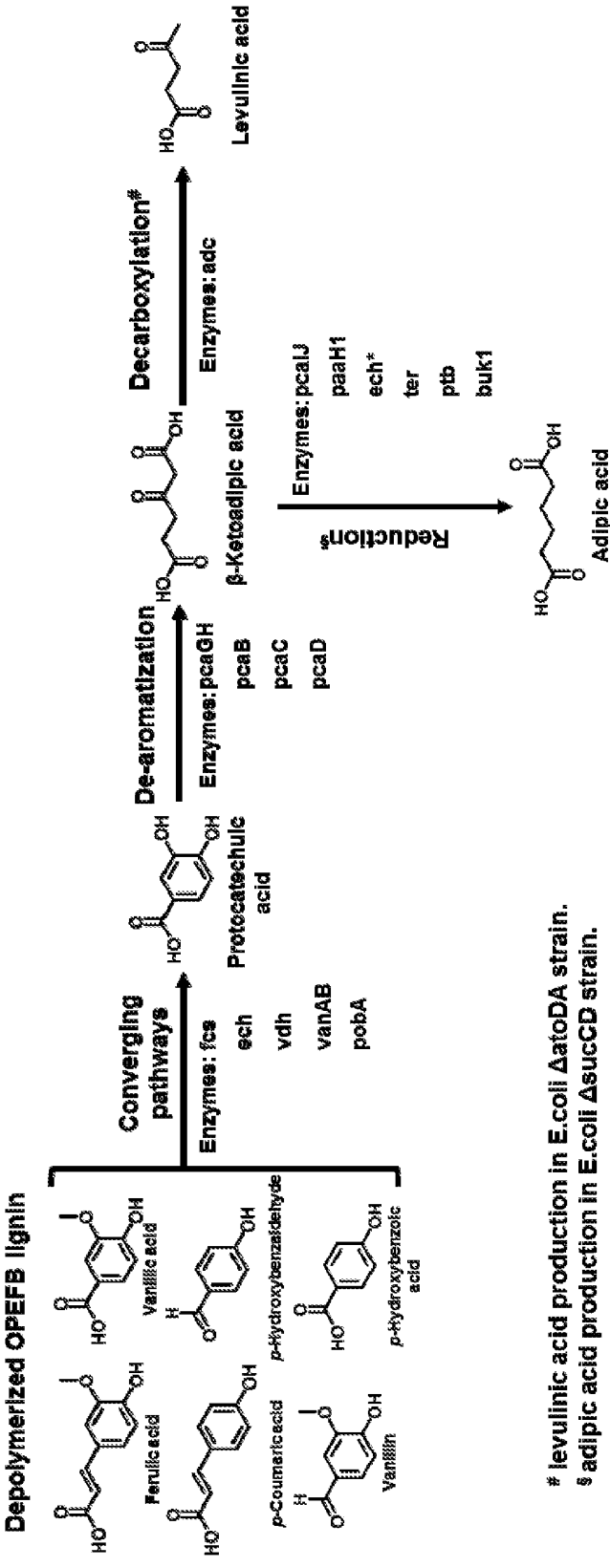


Figure 14



* levulinic acid production in E.coli ΔatoDA strain.
§ adipic acid production in E.coli ΔsucCD strain.