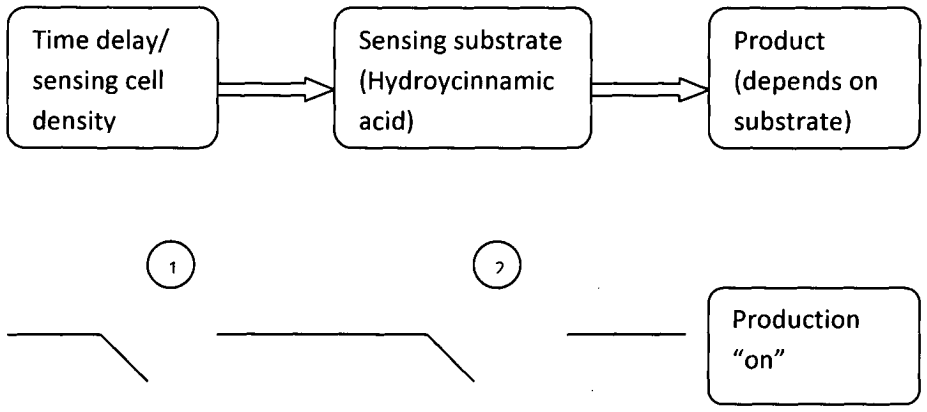
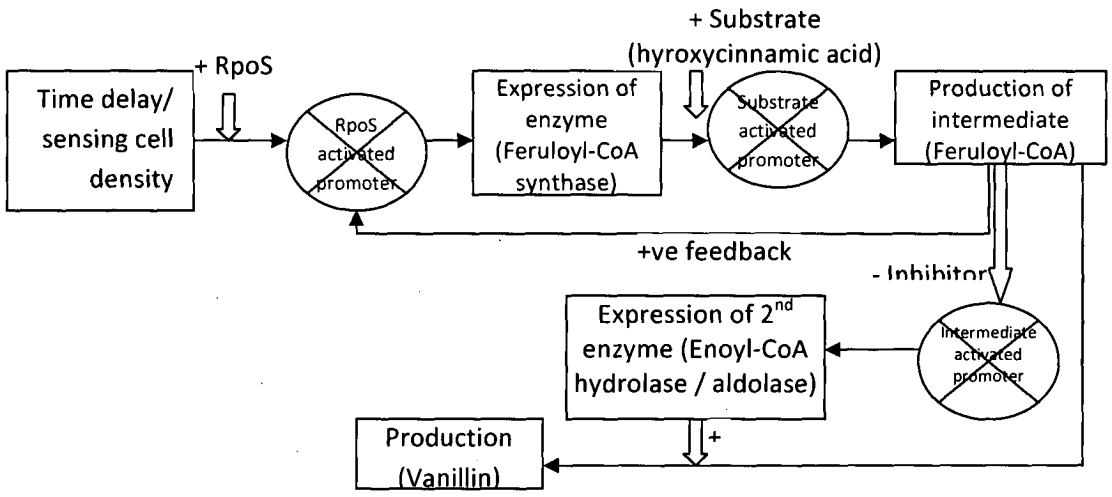

Time delay/ sensing cell density
Sensing substrate (Hydroycinnamic acid)
Product (depends on substrate)
1
2
Production "on"

A


Time delay/ sensing cell density
+ RpoS
RpoS activated promoter
Expression of enzyme (Feruloyl-CoA synthase)
+ Substrate (hyroxycinnamic acid)
Substrate activated promoter
Production of intermediate (Feruloyl-CoA)
+ve feedback
- Inhibitor
Expression of 2nd enzyme (Enoyl-CoA hydrolase / aldolase)
Intermediate activated promoter
+
Production (Vanillin)

B

Figure 1

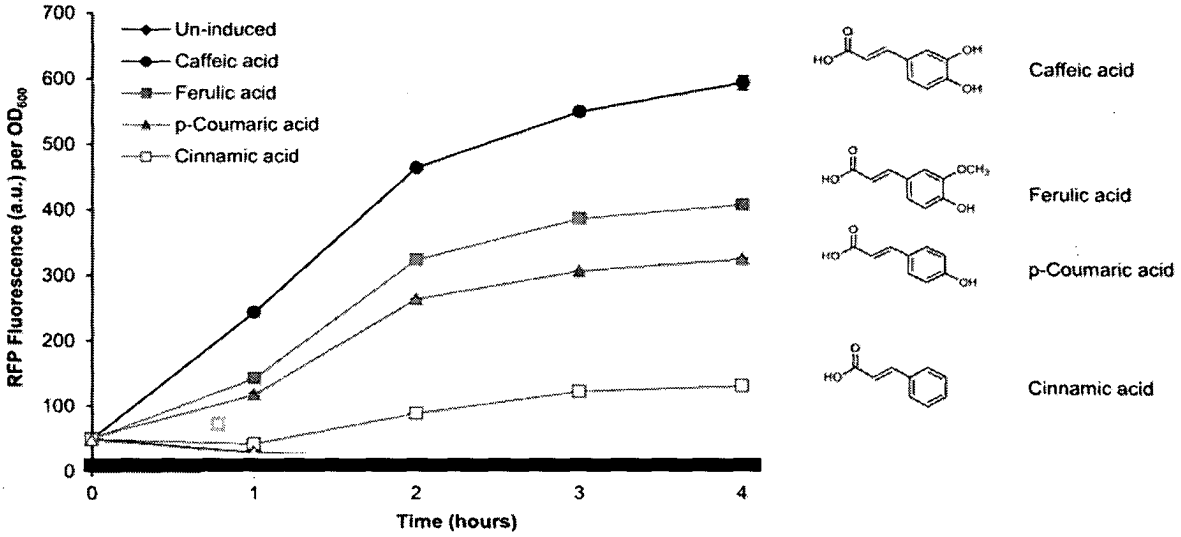


Figure 2

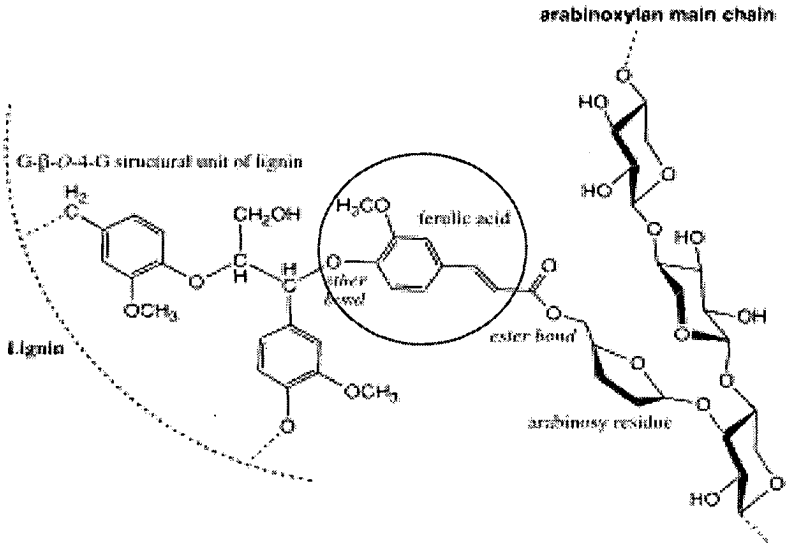


Figure 3

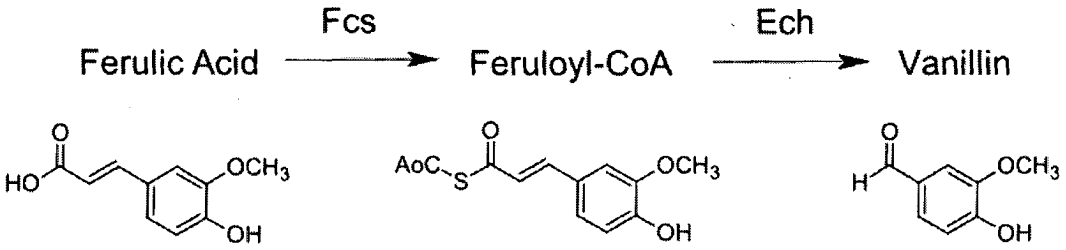


Figure 4

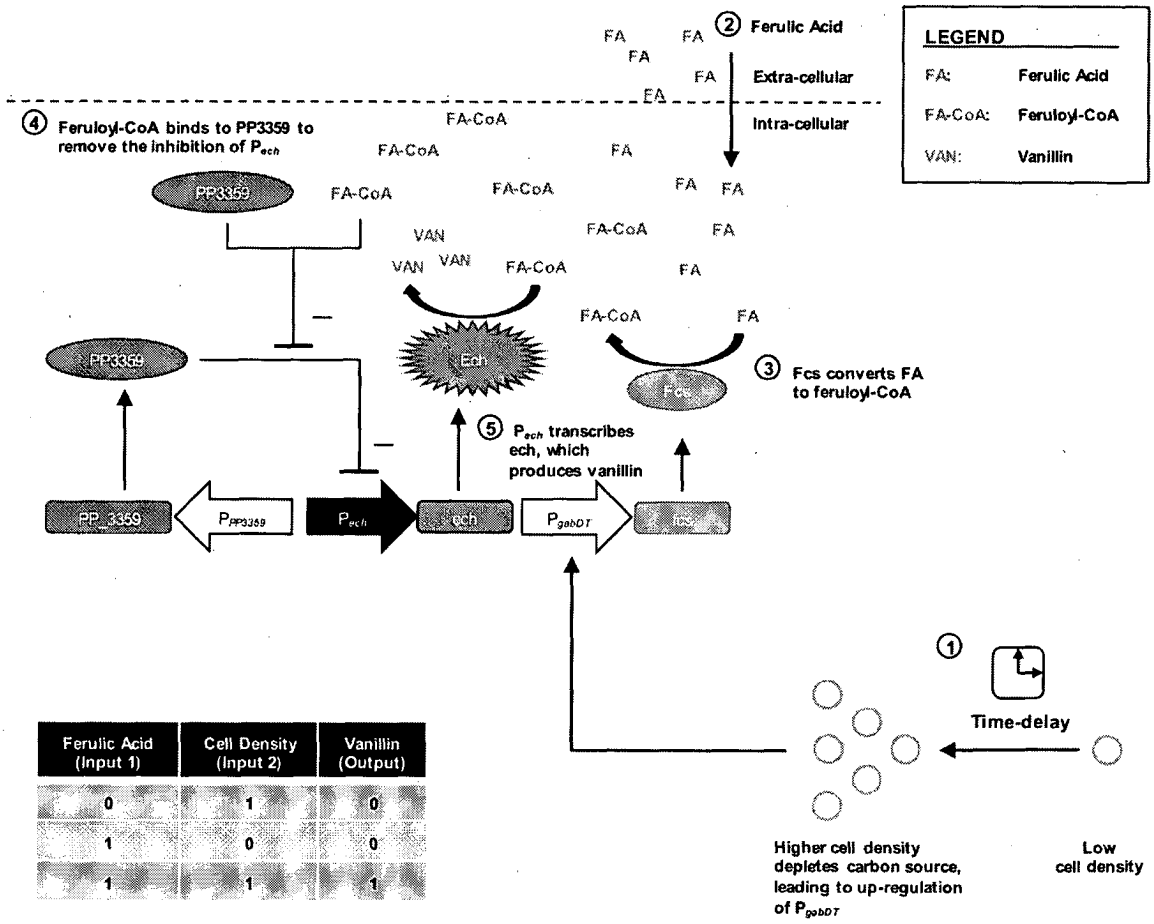


Figure 5

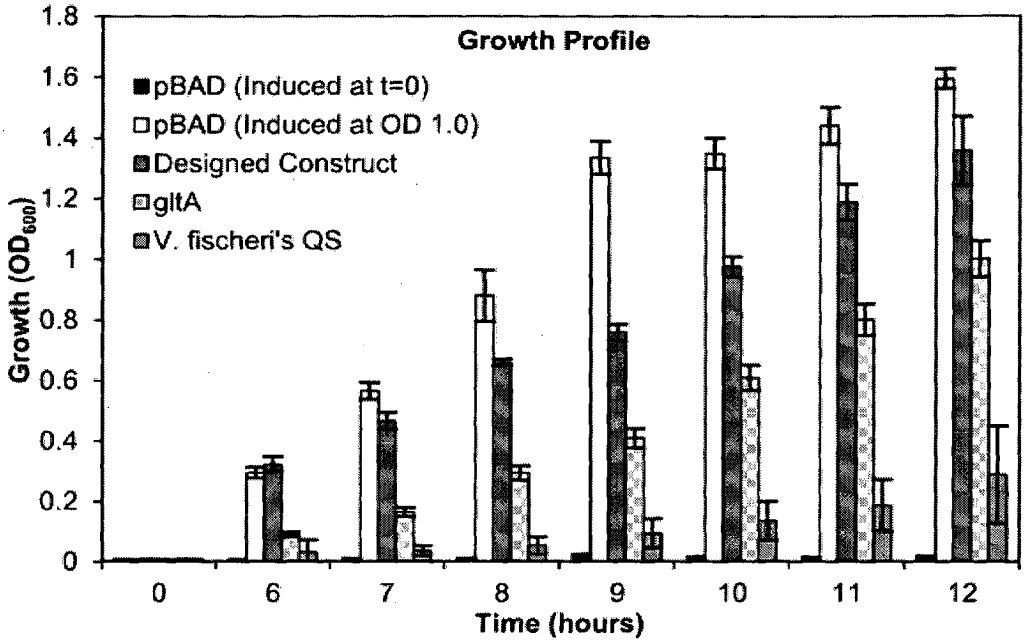


Figure 6

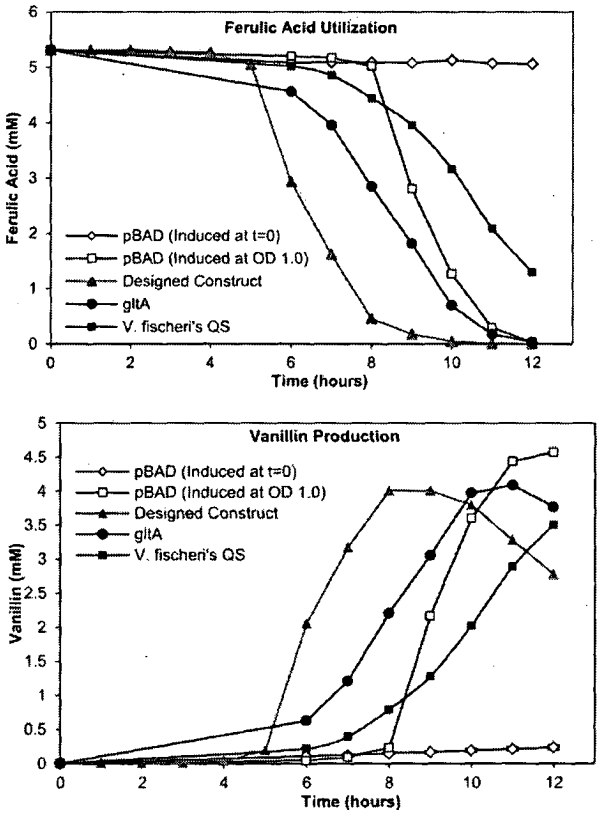


Figure 7