

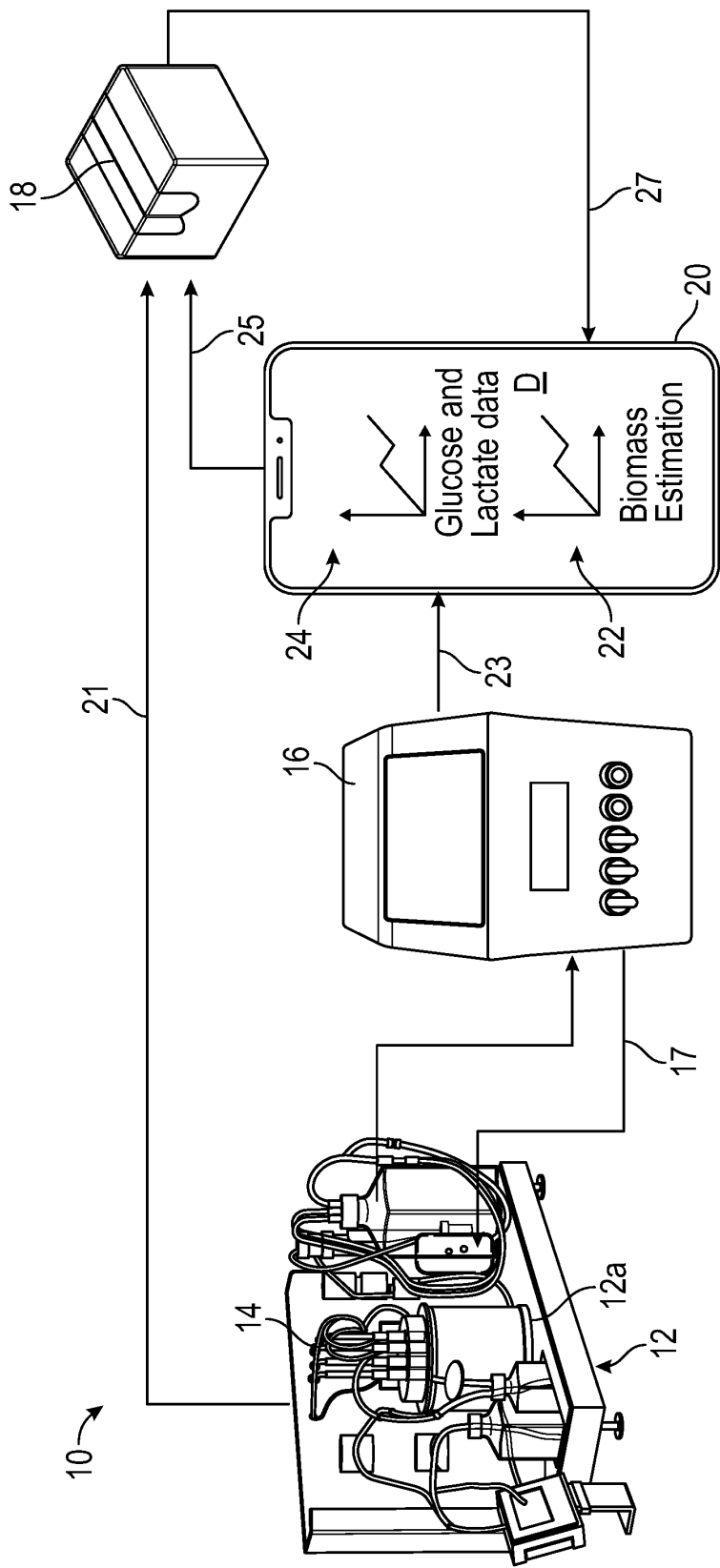


FIG. 1

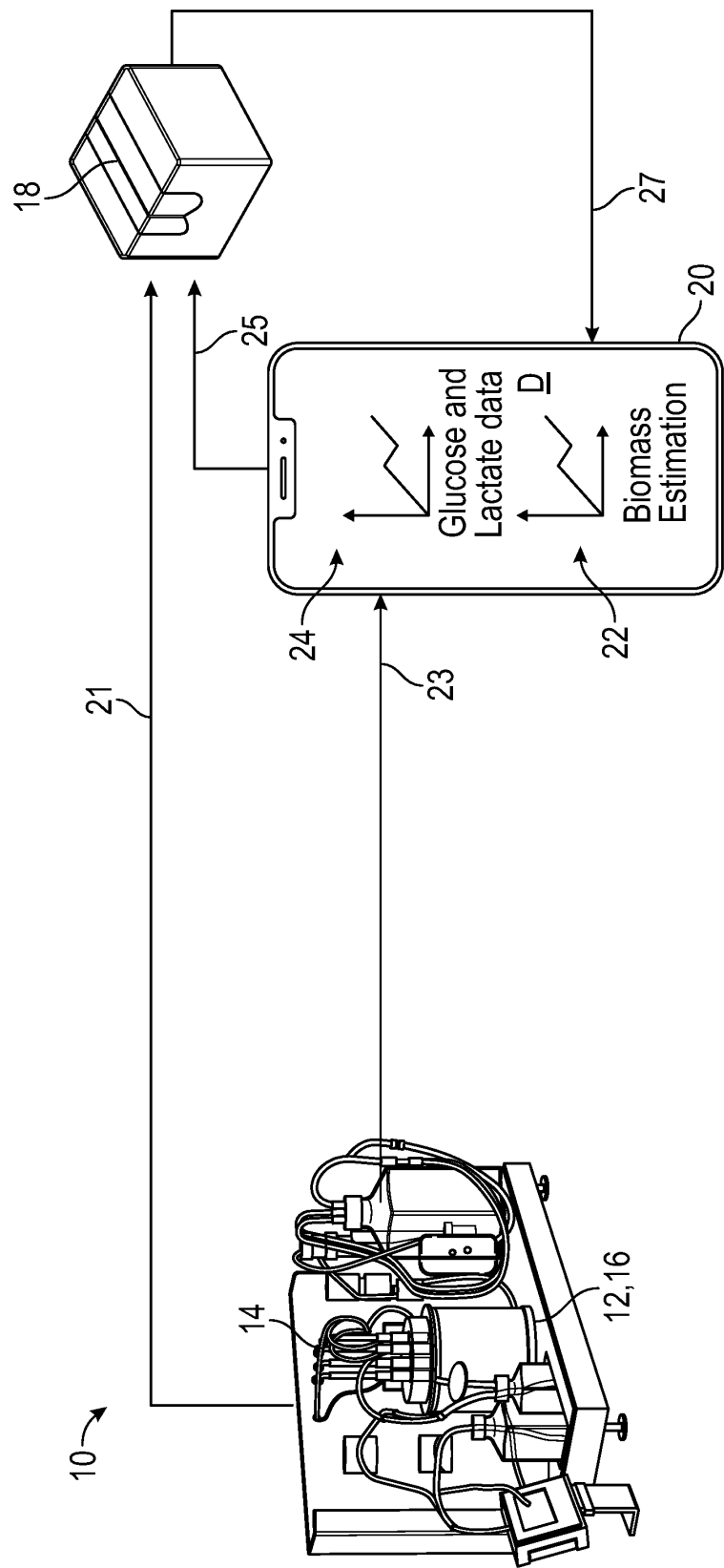


FIG. 2

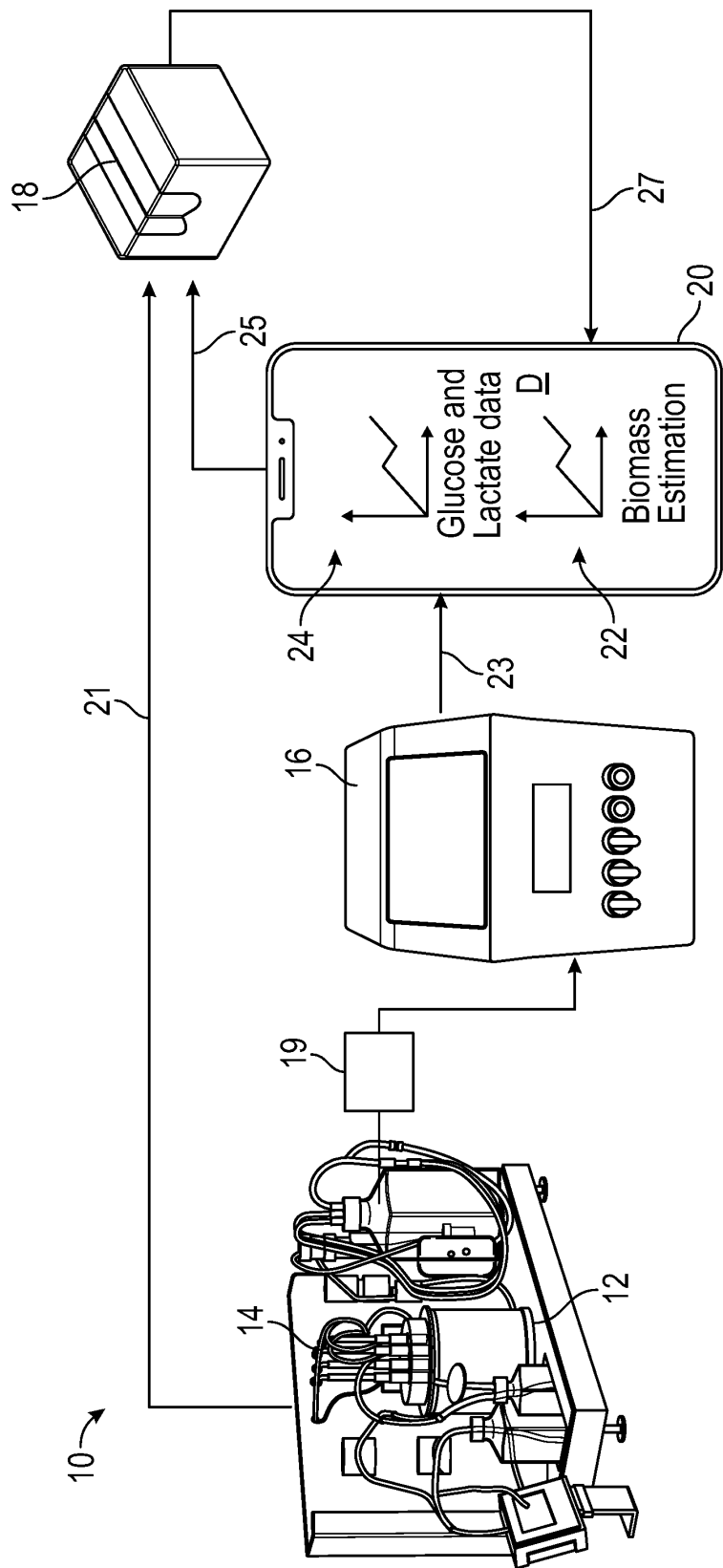


FIG. 3

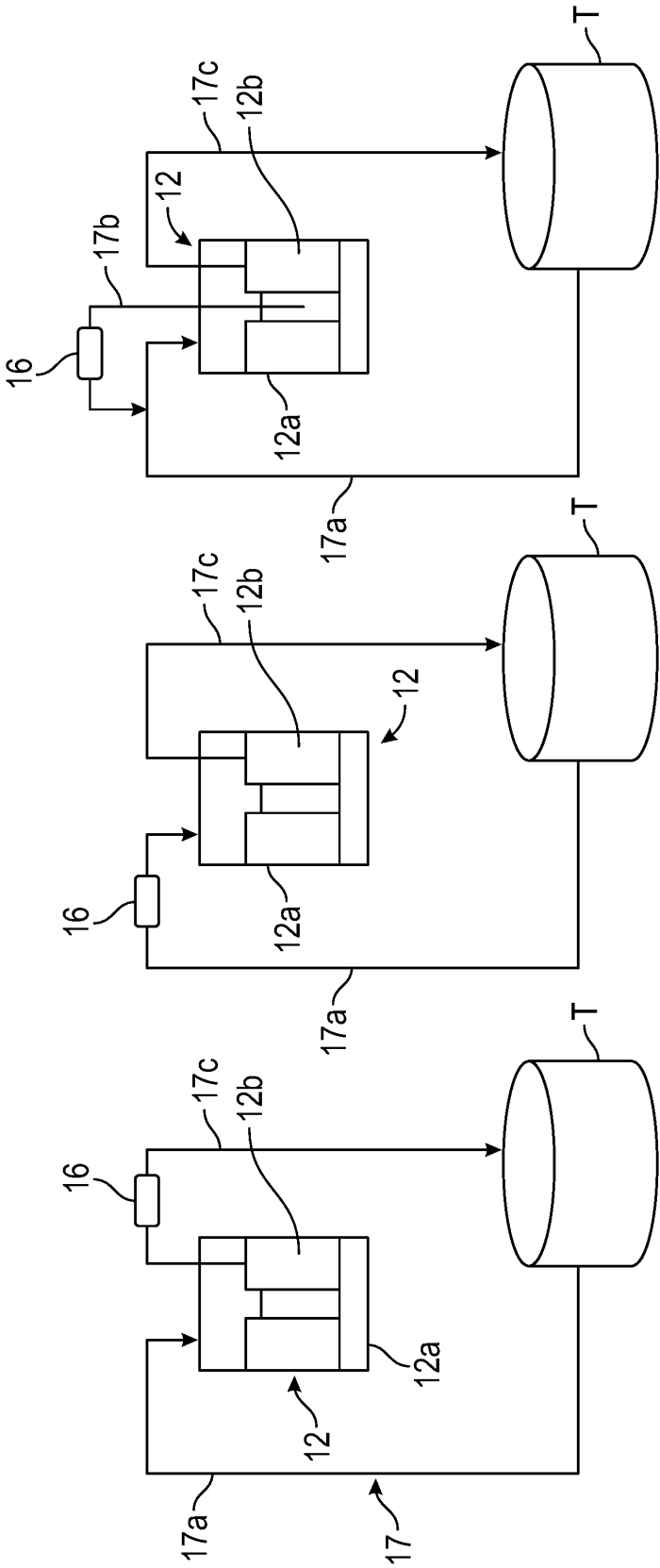


FIG. 4B

FIG. 4A

FIG. 4

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> Growth of X on G:  $G \xrightarrow{\phi_X} k_X X + k_L L$   
 > Global Glucose Uptake Rate:  $\phi_G =$   

$$\mu_{Gmax} \frac{G}{G+K_G} \frac{K_{iL}}{K_{iL}+L}$$
  
 > Mass Balances  
 - Biomass:  $\frac{dX}{dt} = k_X \phi_G X$   
 - Glucose:  $\frac{dG}{dt} = -\phi_G X$   
 - Lactate:  $\frac{dL}{dt} = k_L \phi_G X$

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FIG. 5

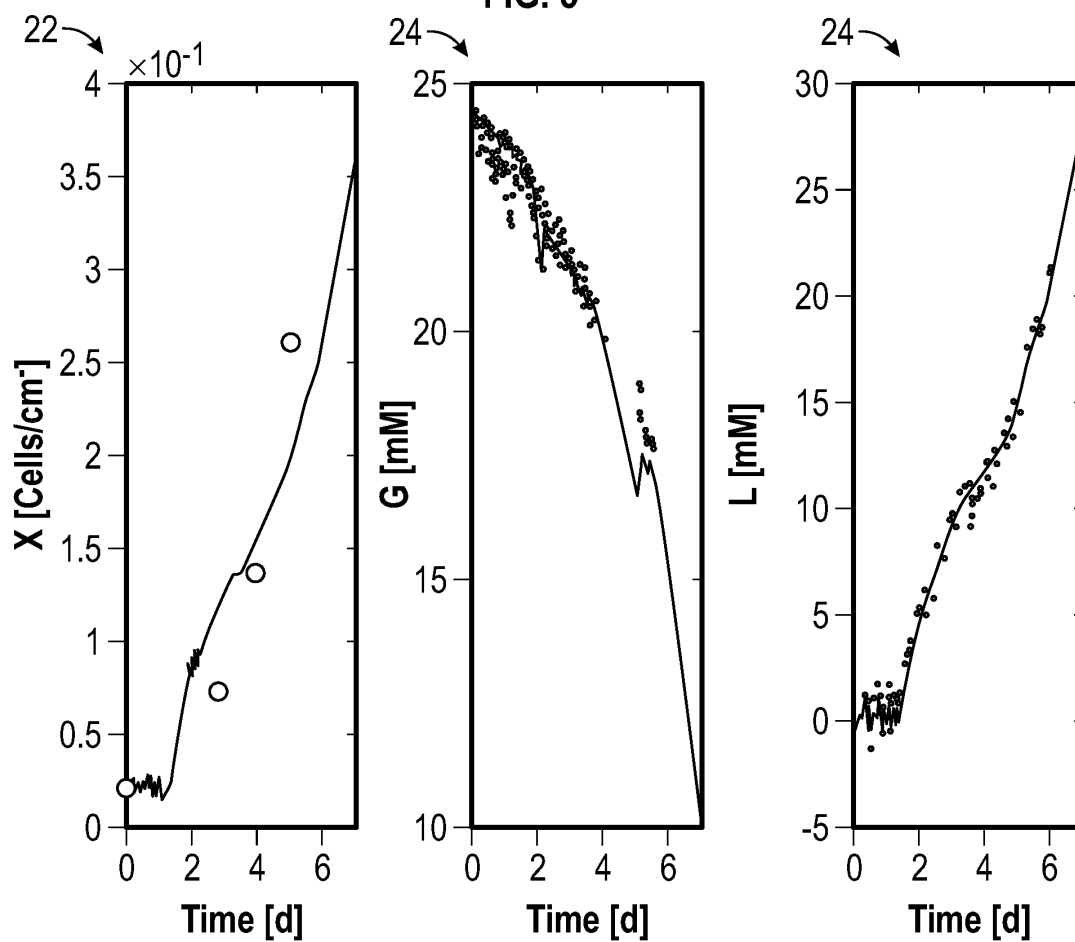


FIG. 6

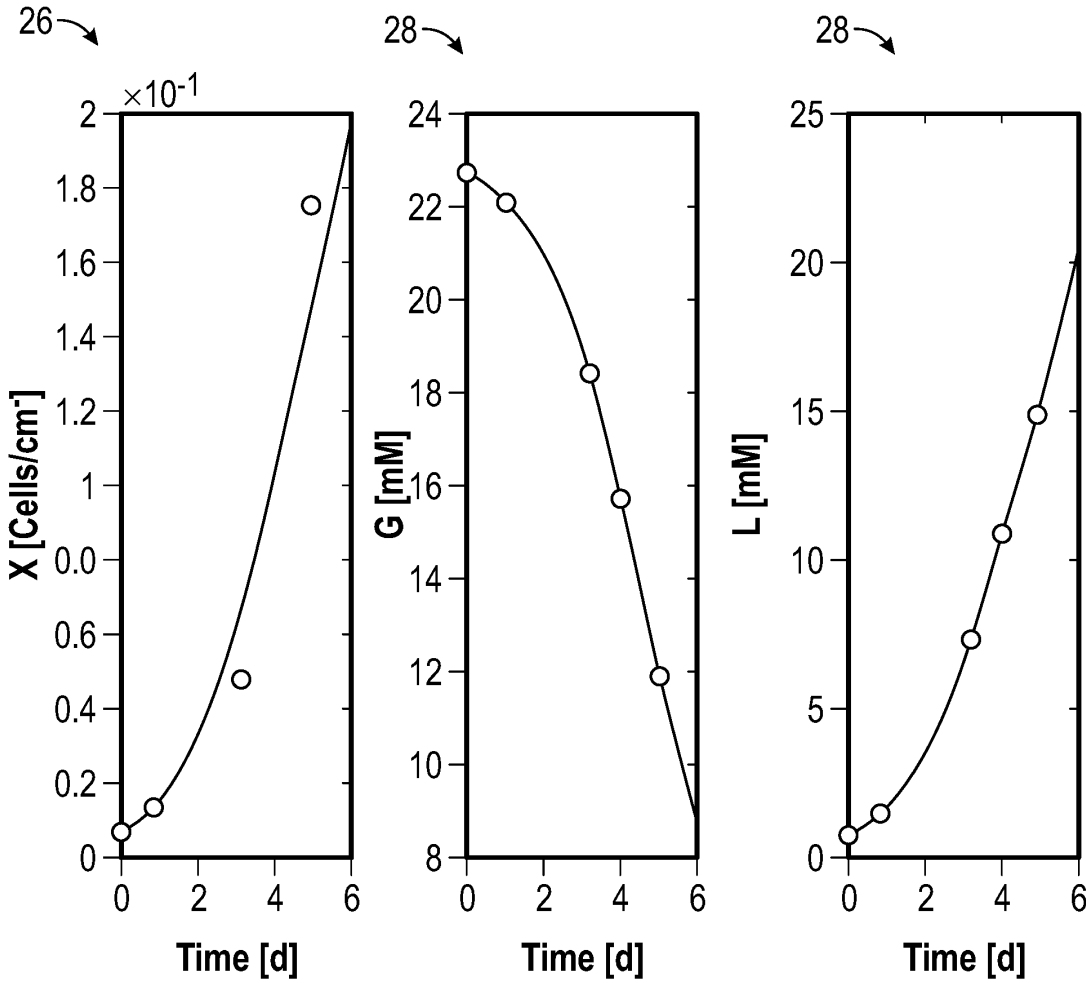


FIG. 7

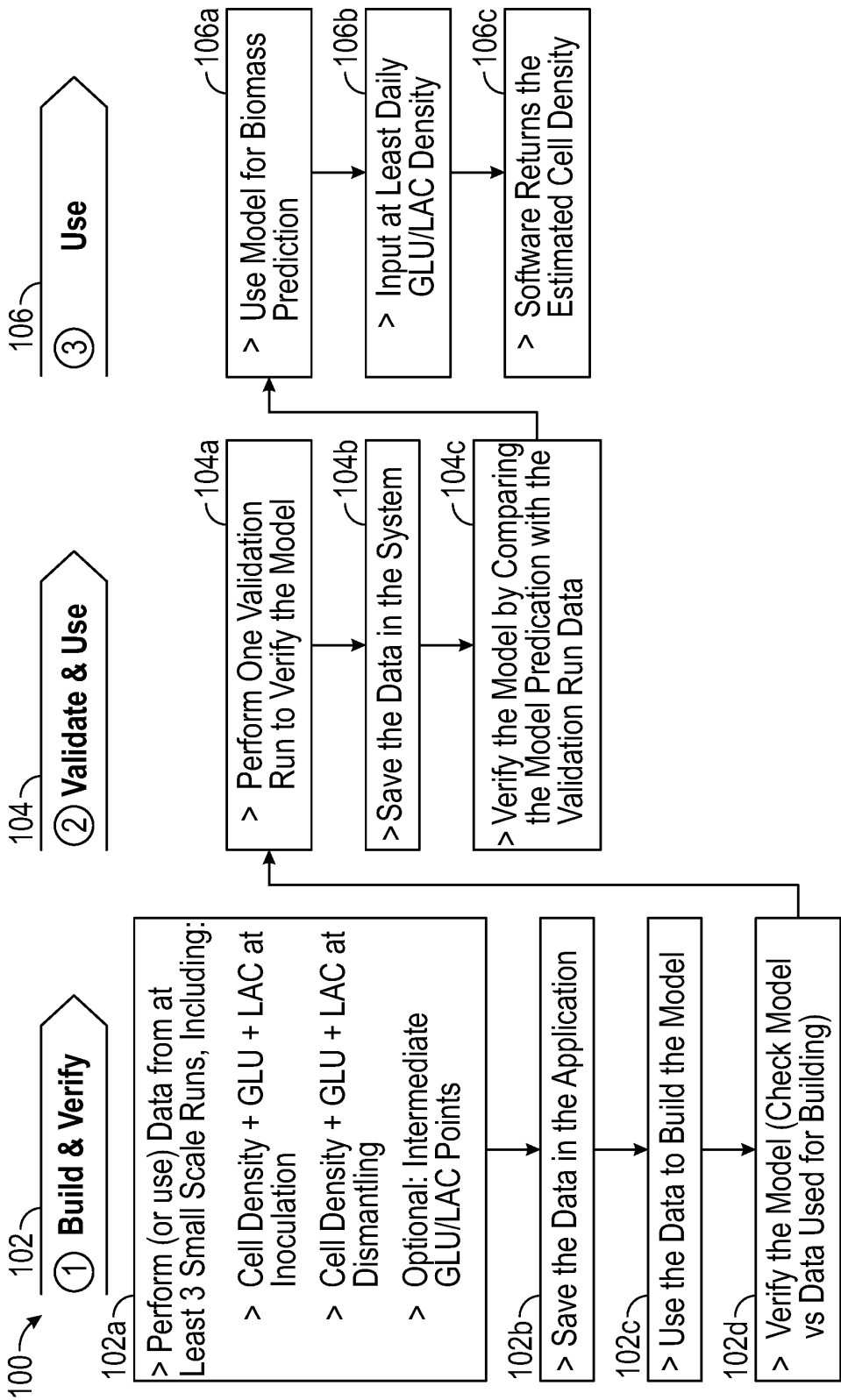


FIG. 8

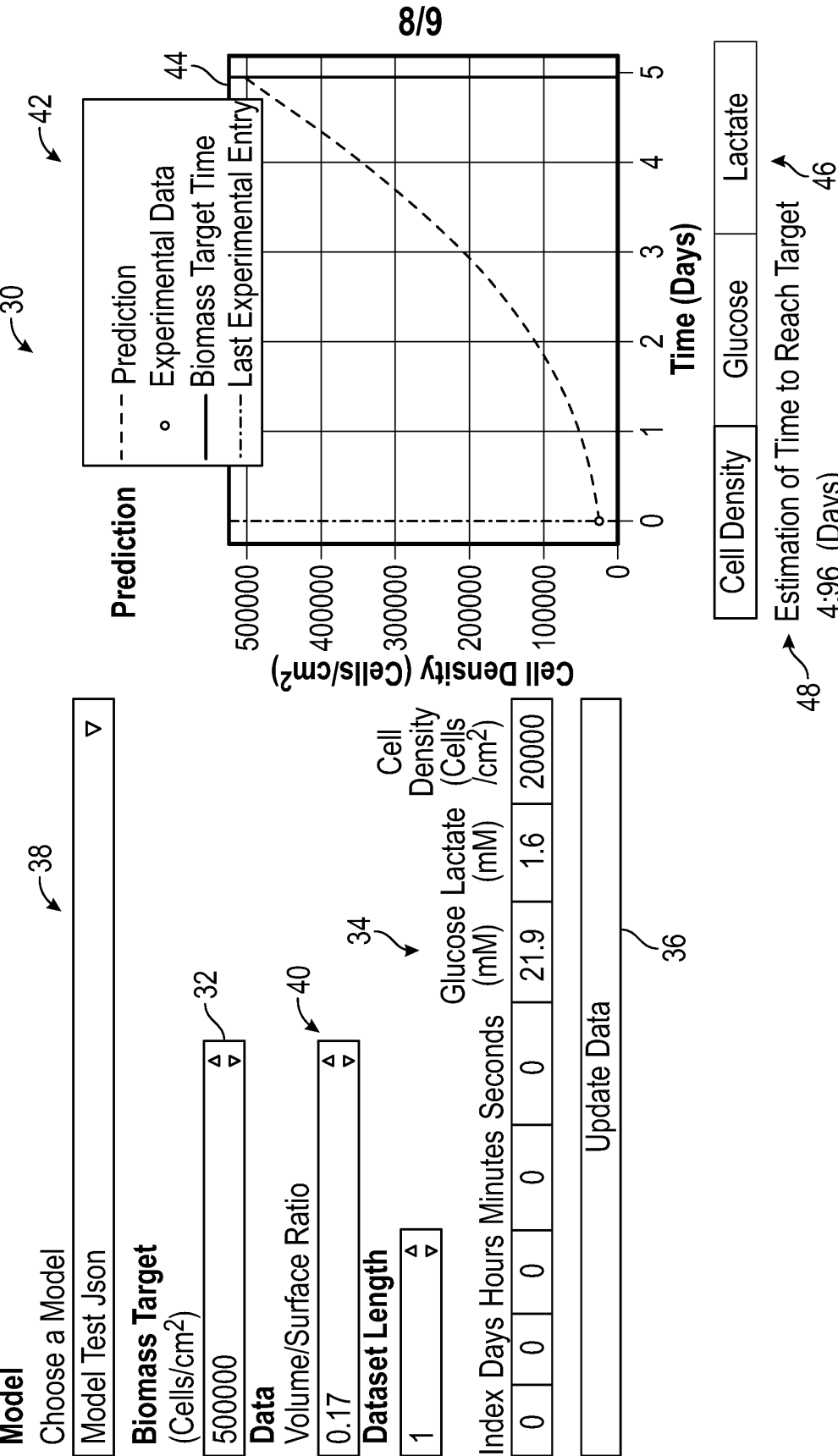


FIG. 9

