

Figure 9.20 Reversed Electron Flow. The flow of electrons in the transport chain of *Nitrobacter*. Electrons flowing from nitrite to oxygen (down the reduction potential gradient) will release energy. It requires protonmotive force or ATP energy to force electrons to flow in the reverse direction from nitrite to NAD^+ .

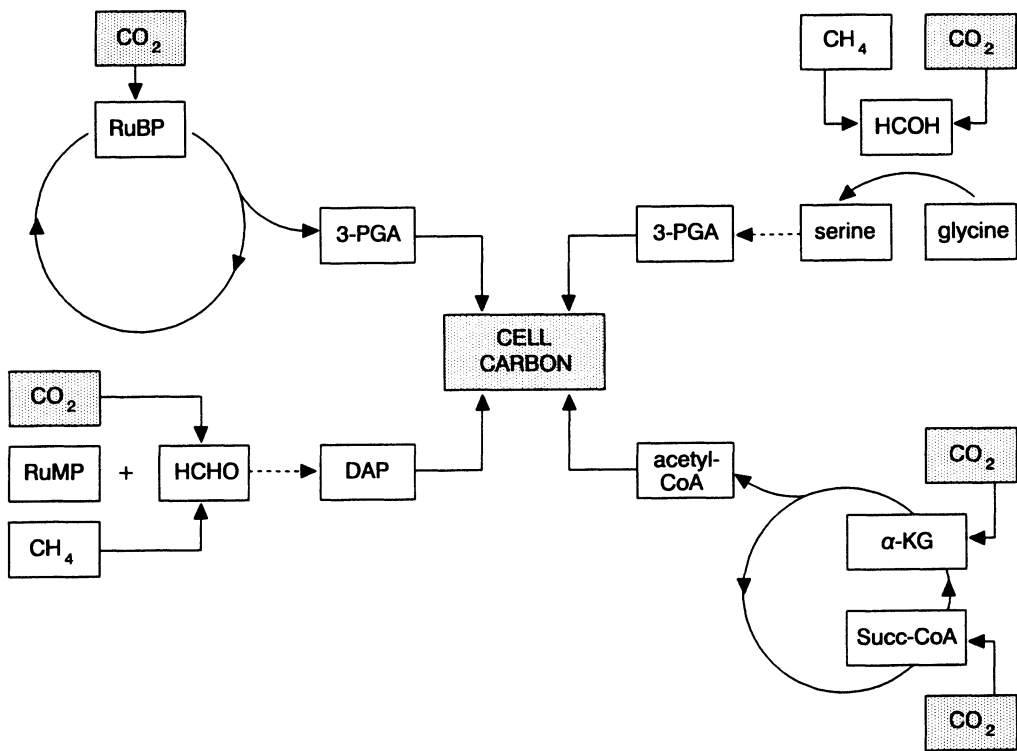


FIGURE 2 Four selected pathways for CO₂ assimilation in chemolithotrophic bacteria. Not shown in this diagram are the noncyclic acetyl-CoA pathway, the reduction of CO₂ to methane, and CO₂ assimilation via anaplerotic reactions (see text for more details). Clockwise from upper left: Calvin cycle, serine pathway, reductive tricarboxylic acid cycle and ribulose monophosphate pathway. Abbreviations include: RuBP=ribulose biphosphate, 3-PGA=3-phosphoglyceric acid, Succ-CoA=succinyl-CoA, αKG=α-ketoglutarate, RuMP=ribulose monophosphate, and DAP = dihydroacetone phosphate.