

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 = dihydroxacetone phosphate.

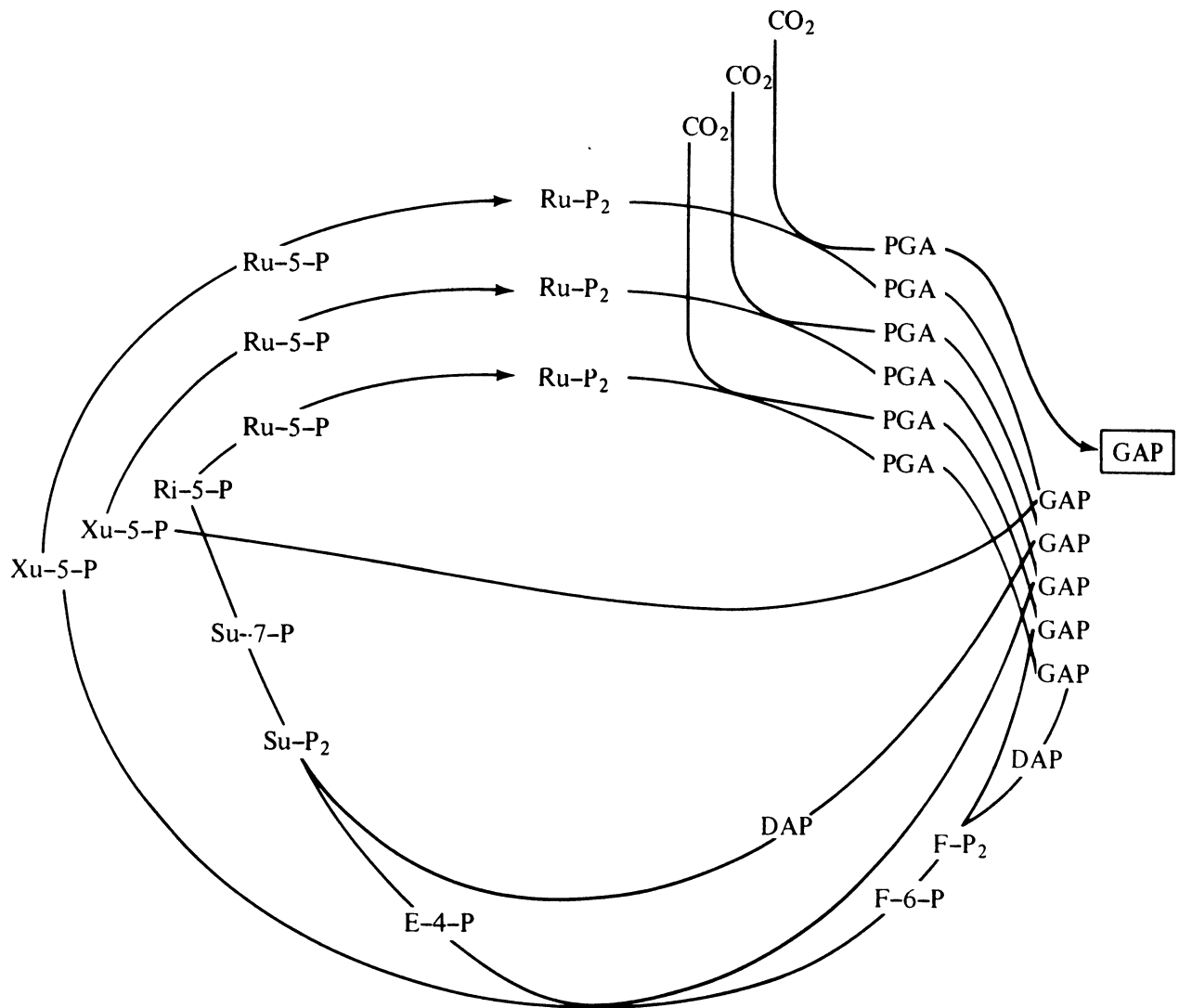


Figure 9.10. The Calvin cycle. Ru-P₂, Ribulose-1,5-bisphosphate; PGA, 3-phosphoglycerate; GAP, glyceraldehyde-3-phosphate; DAP, dihydroxyacetone phosphate; F-P₂, fructose-1,6-bisphosphate; F-6-P, fructose-6-phosphate; E-4-P, erythrose-4-phosphate; Su-P₂, sedoheptulose-1,7-bisphosphate; Su-7-P, sedoheptulose-7-phosphate; Xu-5-P, xylulose-5-phosphate; Ri-5-P, ribose-5-phosphate; Ru-5-P, ribulose-5-phosphate.