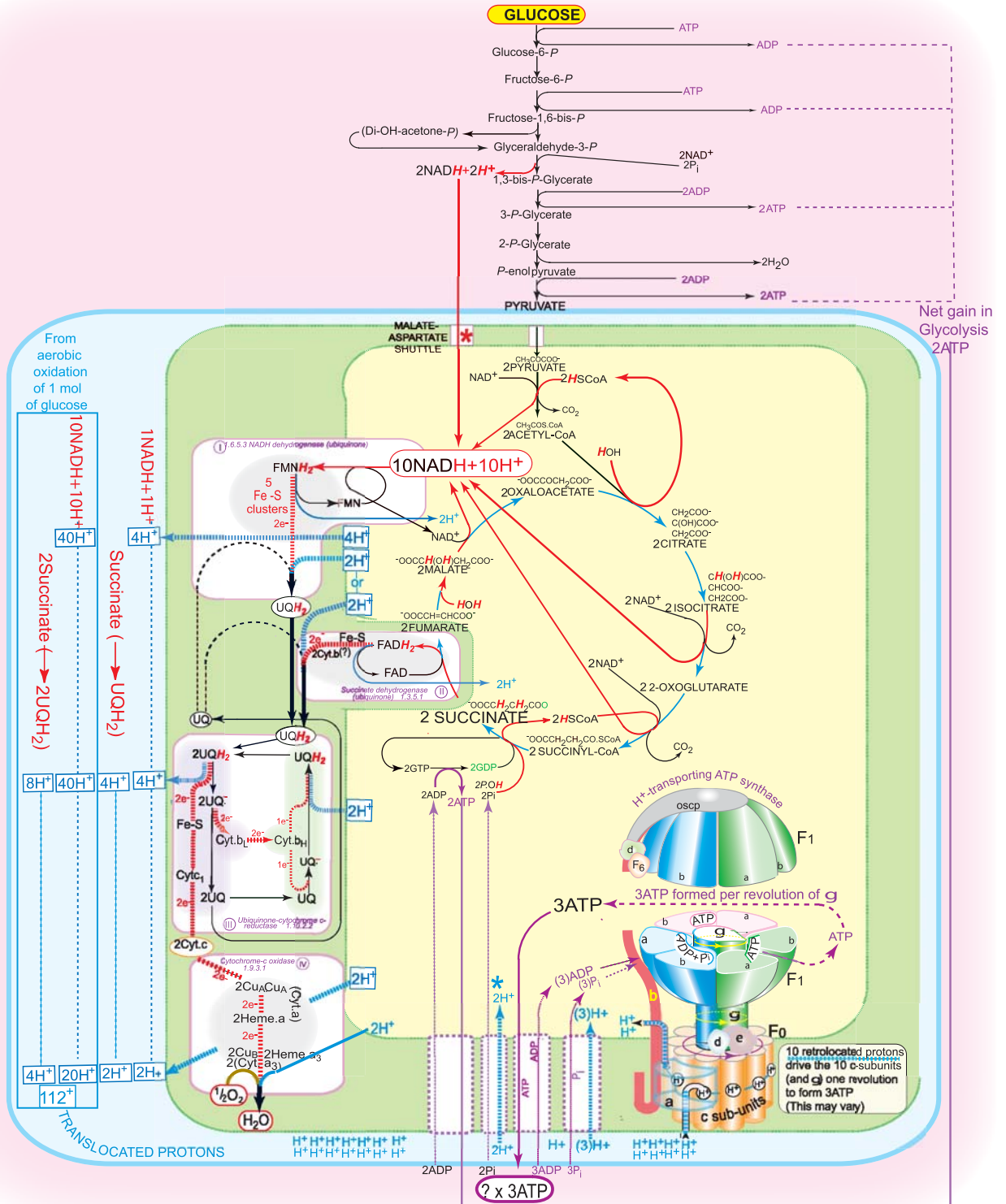


# APPROXIMATE YIELD OF ATP FROM GLUCOSE



## Approximate yield of ATP from oxidation of 1 mol of Glucose

### Translocated Protons per Glucose

From Oxidation of 10NADH + 2 Succinate	112
* Less for transport of 2 NADH in shuttle	-2
* Less for transport of 2 Pi for formation of GTP in TCA cycle	-2
<b>NET yield of translocated protons from 1 mol of glucose</b>	<b>108</b>

### Retrolocated Protons per mol. of ATP

* Assume 10 protons drive formation of 3ATP in 1 revolution of g	
Add 3 " needed for transport of 3 Pi to form 3ATP	
Total of 13 " needed for formation of 3ATP	

Hence 108 " will drive formation of  $(108 \times 3) / 13 = 25 \text{ ATP}$   
 Add 2 ATP formed from GTP in TCA cycle 2 "  
 Add 2 ATP formed in Glycolysis in the cytoplasm 2 "  
 (Approximate) Total **ATP formed per mol. of Glucose = 29**

**AEROBIC OXIDATION OF GLUCOSE- using Malate-Aspartate Shuttle \***

