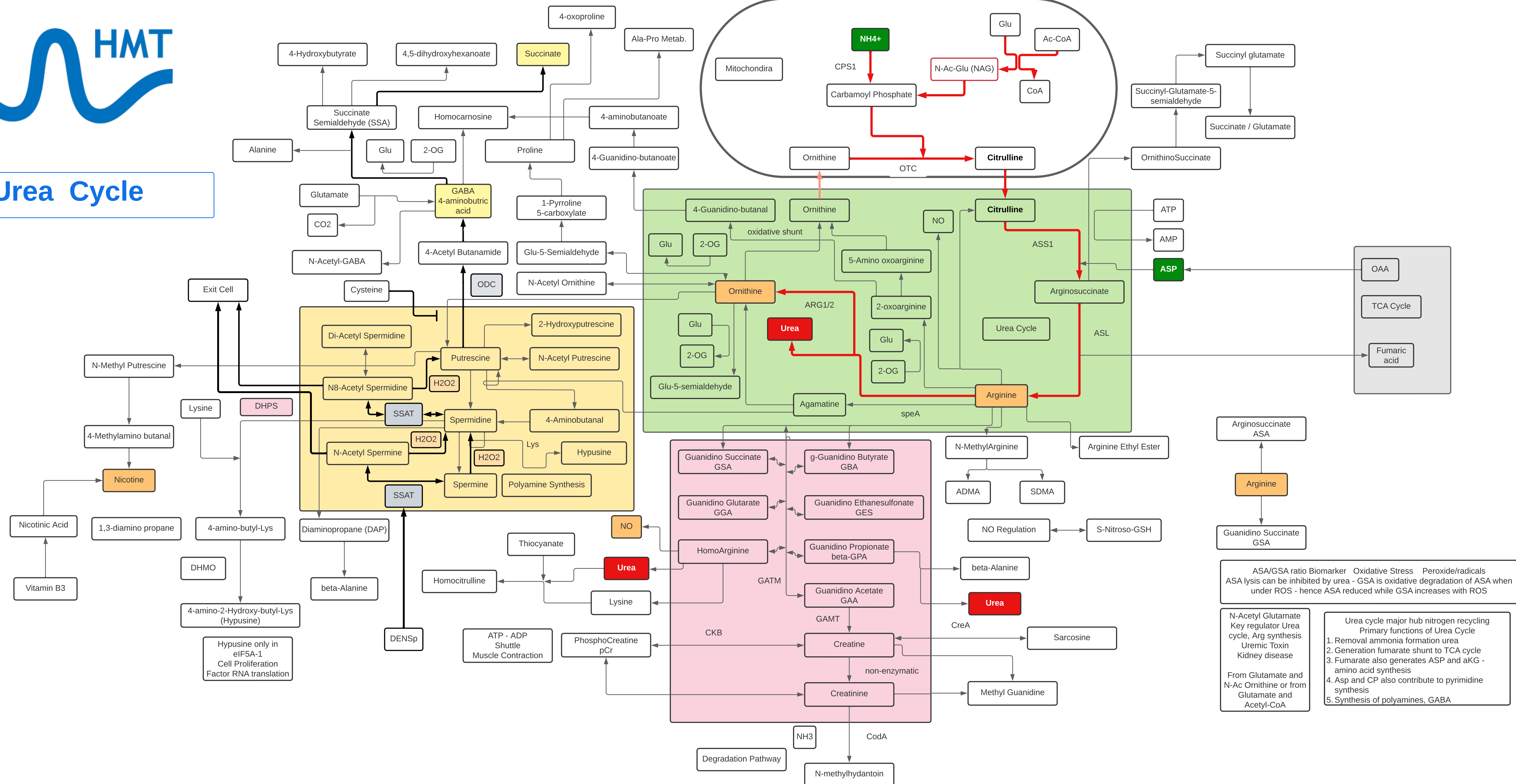




Urea Cycle



ASA/GSA ratio Biomarker Oxidative Stress Peroxide/radicals
ASA lysis can be inhibited by urea - GSA is oxidative degradation of ASA when under ROS - hence ASA reduced while GSA increases with ROS

N-Acetyl Glutamate
Key regulator Urea cycle, Arg synthesis
Uremic Toxin
Kidney disease
From Glutamate and N-Ac Ornithine or from Glutamate and Acetyl-CoA

Urea cycle major hub nitrogen recycling
Primary functions of Urea Cycle
1. Removal ammonia formation urea
2. Generation fumarate shunt to TCA cycle
3. Fumarate also generates ASP and aKG - amino acid synthesis
4. Asp and CP also contribute to pyrimidine synthesis
5. Synthesis of polyamines, GABA