- 6.3.4.5: ATP + L-Citrulline + L-Aspartate => AMP + Diphosphate + N-(L-Arginino)succinate
- 4.3.2.1: N-(L-Arginino)succinate => Fumarate + L-Arginine
- 3.5.3.1: L-Arginine + H2O => L-Ornithine + Urea
- 2.1.3.3: Carbamoyl phosphate + L-Ornithine => Orthophosphate + L-Citrulline
- 1.14.13.39: 2 L-Arginine + 4 Oxygen + 3 NADPH + 3 H+ <=> 2 Nitric oxide + 2 L-Citrulline + 3 NADP+ + 4 H2O

