The paper reports the outlines of the pathway of urea synthesis in the mammalian liver. It shows that ornithine promotes urea synthesis like a catalyst and that citrulline, arginine, and ornithine participate in a cyclic sequence, the net effect being the formation of urea from CO2 and two molecules of ammonia. [The SCI® indicates that this paper has been cited over 2,180 times since 1961.]

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"Historians of science have rated this paper indeed as a major discovery. Joseph S. Fruton wrote. "This work marked a new stage in the development of biochemical thought. Not only was an explanation of a biochemical synthesis offered for the first time in terms of chemical reactions identified in the appropriate biological system and not merely inferred by analogy to the known chemical behaviour of the presumed reactants, but also the paper provided a clue to the organisation of metabolic path ways in living cells. This became evident in 1937 with the appearance of the Krebs citric acid cycle, whose conceptual relation to the earlier ornithine cycle was obvious."  