Table 1. Building a critical mass of data on urea excretion by the kidneys before Giordano.
Modified from reference n. 10

Year	Scientist/Lifespan/Country	Discovery
After 168AC	Galen (129-c.130-c.200/c.216 AC) Pergamon and Rome	*Excessive food intake causes cold and moist diseases.*
1591	Pospero Alpini (1563-1616), Republic of Venice	*First description of Mediterranean diet.*
1614	Santorio Santorio (1561-1636), Republic of Venice.	*Balance between food and drink intake and excreta (urine, feces, and perspiration).*
1664	Jan Baptist van Helmont (1580-1664), Belgium	*Urea a natural salt of the urine*
1732	Herman Boerhaave (1668-1738), Holland.	*A native salt of urine that tastes different from sea salt. Resembles ''sal ammoniac.''*
1773	Hilaire Rouelle (1718-1779), France.	*Saponaceous extract of urine; high in nitrogen content, crystallizes into octahedral rather than cubic crystals of sea salt.*
1785	Claude-Louis Berthollet (1748-1822), France.	*Urea source of ammonia in urine.*
1798	William Cruickshank (d. 1810) UK.	*Urea crystallizes by addition of nitric acid; isolated the crystals in diabetic urine*
1799-1908	Antoine Fourcroy (1755-1809), France.	*Urea crystallized, nitrogen content determined*
1813	John Bostock (1773-1846), UK.	*First to realize the relationship between the diminution of urea in urine and its raising in blood.*
1814	William Prout (1785-1850), UK.	*Analyzed isolated pure urea crystals. Confirmed Bostock's findings.*
1821	Jean Louis Prevost (1790-1850), France.	*Extra-renal origin of urea. Elevated blood urea after bilateral removal of the kidneys*
1828	Friedrich Wöhler (1800-1882), Germany	*First to synthesize urea, an organic substance, from silver cyanate and ammonium chloride.*
1829	Robert Christison (1797-1882), UK.	*Urea increased in blood and reduced in Urine of patients with Bright's disease.*
1836	Richard Bright (1789-1858), UK.	*1st description of dropsy and proteinuria in end-stage kidney disease.*
1833	George Owen Rees (1813-1889), UK.	*Elevated blood urea in diabetic patients.*
1850	Thomas Graham (1805-1869) UK.	*Dialysis of urea across semi-permeable membranes.*
1850	Mariano Semmola (1831-1895), Kingdom of Naples.	*Effects of various protein intakes on albuminuria, urinary uremia and specific gravity in Bright's Disease.*
1851	Friedrich T. Von Frerichs (1819-1885),Germany.	*Identified stages of Bright disease through urea concentration.*
1856	Antoine Bechamp (1826-1908), France.	*Urea product of protein oxidation.*
1856	Joseph Picard (1834-1896, France.	*Differential urea levels between renal artery and vein.*
1869	Lionel Smith Beale, USA.	*Low protein diet in renal disease would lower urea generation.*
1868	Adolph Fick (1829-1901), Germany.	*Calculated filtration rate from urea excretion.*

1883	Johann Kjeldhal (1849-1900), Denmark.	*Introduced an exact method for nitrogen measurement.*
1902	Hermann Strauss (1864-1944), Germany.	*Blood urea introduced in clinical medicine*
1904	Fernand Widal (1862-1929).	*Relation of protein intake to blood urea in Bright's disease.*
1904	Nestor Gréhant(1838-1910), France.	*First simultaneous determination of urea in blood and urine.*
1910	Leon Ambard (1883-1962) France.	*Introduced the urea coefficient (blood to urine urea concentration ratio).*
1918	Franz Volhard (1872-1950), Germany.	*A vegetarian low protein diet may ameliorate uremic symptoms.*
1927	MacKay EM and MacKay LL, (USA).	*Gaussian distribution of blood urea concentration.*
1931	Newburgh LH, Johnston MW, USA.	*High nitrogen diets and renal injury. The dependence of the injury upon the nature of the nitrogenous substance.*
1932	Hans Krebs (1900-1981), UK.	*Urea (ornithine) cycle.*
1944	Walter Kempner (1903-1997), USA.	*Treatment of kidney disease and hypertensive vascular disease with a diet of 250-350 g of rice a day.*
1948	Thomas Addis (1881-1949), UK-USA.	*Protein restriction may be beneficial in uremia.*
1954	Theodore N Pullman, USA.	*Early studies the effects of various protein intakes on GFR.*
1955	John P Merrill (1917-1984), USA.	*Experience with AKI let him suggest for CKD a diet of 0.5-0.6 g/Kg of protein a day.*