

A GLIMPSE OF OUR PAST

Guillaume Rondelet (1507–1566): Cardinal Physician and Anatomist Who Dissected His Own Son

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The 16th century French anatomist Guillaume Rondelet will be remembered as a great naturalist and a founder of ichthyology. Little known to most is that Rondelet was a proficient anatomist and contemporary to Vesalius and in fact, both studied anatomy under Johannes Gunter. Even less known is that he established the first dissecting theatre at Montpellier and it was here that he would dissect his infant son in an attempt to identify the cause of death. In this article, we review the life and contributions to anatomy of Rondelet. *Clin. Anat.* 27:279–281, 2014. © 2013 Wiley Periodicals, Inc.

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INTRODUCTION

Guillaume Rondelet (Fig. 1) was born on September 27, 1507 in Montpellier, France. His father was a drug and spice merchant. He was orphaned at a young age as both of Rondelet's parents died while he was a child, leaving him to be raised by his older brother. In 1525, Guillaume left the south of France and enrolled at the Collège de Sorbonne in Paris. After receiving his degree in 1529, Rondelet returned to his hometown to study at the Faculty of Medicine in Montpellier. Within a year at the Faculty, Rondelet became procurator (student Registrar) at the university (Keller, 2008). In 1530, French Renaissance writer François Rabelais attended school in Montpellier and stayed there for two years, returning in 1537 for his doctorate in medicine (Williams, 2009). As a student of Rondelet's, Rabelais gained his trust as the two became friends at Montpellier. Later, when Rabelais wrote *La vie de Gargantua et Pantagruel*, he satirized Rondelet as the character, Rondibilus (Kingsley, 1902).

Rondelet was not a wealthy man and in order to support himself financially, he left Montpellier to find work. He began to practice medicine and teach school children in the village of Vaucluse at the foot of the Alps, after which he returned to Paris and tutored the son of Vicomte de Turenne—who was among France's greatest military commanders (Kingsley, 1902). In

Paris, Rondelet learned Greek and studied anatomy under Gonthier of Andernach (Johannes Gunter), who at the time was teaching anatomy to Andreas Vesalius (Kingsley, 1902). Before returning to Montpellier to receive his doctorate in 1537, Rondelet made one last stop to practice medicine in Auvergne. A year later, Rondelet married Jeanne Sandre. The couple stayed with his wife's sister, Catherine, and were financially supported by her until 1545, when Rondelet was appointed Regius Professor of Medicine at Montpellier (Keller, 2008).

Overlapping with his position as Regius Professor, Rondelet became personal physician to Cardinal François Tournon in 1540. He accompanied Tournon on his trips to Antwerp, Bordeaux, Bayonne, and other towns along the southwest coast of France (Keller, 2008). It was during this time that Rondelet collected much of his work on ichthyology (Kingsley, 1902). In 1549, Rondelet saw two of the earliest botanical gardens, Padua and Pisa, while visiting these universities

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Fig. 1. Portrait of Guillaume Rondelet by Ambroise Tardieu (Image from the History of Medicine, National Library of Medicine).

in northern Italy (Williams, 2009). He would later advocate for a similar garden at Montpellier. Rondelet left Tournon's service in 1551 and returned to Montpellier. Five years later, Rondelet was elected Chancellor of the university and maintained this position until his death in 1566 (Keller, 2008).

RONDELET AS A NATURALIST

Guillaume Rondelet is well known as one of the founders of ichthyology (Gudger, 1934). Through his travels with Cardinal Tournon, Rondelet was able to study fish anatomy along the Mediterranean, forming the basis for his two chief publications. The first was titled: *Libri de Piscibus Marinis, in quibus verx Piscium effigies expressse sunt* and was published in 1554. It is composed of a series of books with the first four devoted to the morphology and internal anatomy of fish. The remaining books in the series described the 244 types of fish known to Rondelet at the time. Although the title refers to marine fish, Rondelet also included descriptions of 47 fresh water fish (Gudger, 1934). It should also be noted that this work was not restricted to fish, but included all aquatic animals, including marine mammals, arthropods and mollusks, amphibians, and even beavers (Keller, 2008). Rondelet dedicated his work to Cardinal Tournon.

Rondelet's next major publication was published the following year and titled *Universo aquatiliu Historie pars altera, cum veris ipsorum Imaginibus* (Gudger, 1934). This was essentially considered the second volume to his previous work and was com-

posed of seven books, of which three were devoted to describing fresh water fish (Gudger, 1934). A few years later, his works were translated into French by one of his students, Laurent Joubert, and titled *L'histoire entière des poisons* (Keller, 2008).

While Rondelet was gathering his work on the natural history of fish, so were Pierre Belon and Hippolyto Salviani (Kingsley, 1902). These three men published their books on fish around the same time, creating suspicion that this may not have been coincidental (Gudger, 1934). Despite these similarities, Rondelet's work was considered more detailed and advanced than the work produced by Belon, serving as the main reference work on Mediterranean fish until 1810 (Gudger, 1934). Rondelet, Belon, and Salviani, along with Ulyssis Aldrovandi and Conrad Gessner, were the five great naturalists of the sixteenth century (Gudger, 1934).

RONDELET AS AN ANATOMIST

In addition to his contributions to the study of fish, Rondelet was France's foremost anatomist at the time (McCann, 1941). He has been described as a progressive anatomist who believed in frequent dissection. Rondelet probably first described the ileocecal valve rather than Bauhin (Buck, 1917). He made detailed studies on the stomach, liver, kidneys, and heart and was a proponent of "form follows function." As chancellor of the Faculty of Medicine in Montpellier, he petitioned the opening of France's first dissecting amphitheatre at the university (McCann, 1941). The theatre was built as a teaching tool for the dissection of cadavers.

One of the most distinctive events in Rondelet's career as an anatomist is that he dissected the cadaver of his own infant son (McCann, 1941). When the amphitheatre opened in Montpellier, Rondelet found it almost impossible to obtain cadavers for dissection. Although it was legal, there was significant prejudice and stereotyping surrounding the use of human cadavers for dissection. When his own infant son died, Rondelet saw this as a teaching opportunity and publicly dissected him in the new amphitheatre to determine the cause of death (McCann, 1941).

Rondelet had hoped that the knowledge gained from this dissection would help others. After the dissection, he exclaimed to his student, Michel Nostradamus and as written by McCann (1941), "We have come a long way from the days when Charles of Anjou granted this university permission to use one corpse a year—and this had to be the corpse of a criminal." Rondelet was enthusiastic about the progress that he had made in the field of anatomy. He stated and again as worded by McCann (1941), "Mark you, we do not know any more yet than our ancestors, but thanks to Aristotle, we are learning how to go after knowledge, how to observe and study facts—that is what will carry medicine forward."

RONDELET AND HIS STUDENTS

Guillaume Rondelet taught at the Faculty of Medicine in Montpellier from 1545 until his death in 1566.

His reputation at the university as a pioneer in anatomy and marine zoology attracted a large number of students to Montpellier (Gudger, 1934). Among his many students were François Rabelais (1483–1553), Leonard Fuchs (1501–1566), Jacques Dalechamps (1513–1588), Conrad Gesner (1516–1565), Pierre Belon (1517–1560), Charles de L'Écluse (1526–1609), Mathias De L'Obel (1538–1616), Felix Platter (1536–1614), Jean Bauhin (1541–1612), and Laurent Joubert (1529–1582).

In 1568, Laurent Joubert authored a biography on Rondelet's life, entitled *Vita Gulielmi Rondeletii*. Joubert's account of Rondelet's life was more than just professional; his biography was filled with personal details and psychological characterization of his mentor (Siraisi, 2007). While Joubert celebrated his teacher's achievements, he also noted his shortcomings. He was critical of Rondelet's haste and carelessness as a writer and his habit of leaving works unfinished before moving on to new projects. He also disapproved of Rondelet dividing his focus throughout various subjects. However, Joubert, along with many of Rondelet's other students characterized him as an exceptionally dedicated, hardworking, and effective teacher (Siraisi, 2007). Along with his accomplishments as a naturalist, Joubert stressed Rondelet's achievements as an anatomist. He emphasized Rondelet's studies with Gonthier of Andernach, his role in creating an anatomy theatre in Montpellier, and his enthusiasm for the subject, which led him to dissect

the corpse of his own son (Siraisi, 2007). After Rondelet's death, Joubert was named his literary executor and declared to be the most trusted of Rondelet's pupils (Siraisi, 2007).

In the summer of 1566, Rondelet traveled to Toulouse in the south of France to settle some affairs for his relatives (Kingsley, 1902). Given the poor sanitary state of the city, Rondelet fell victim to dysentery. Struggling, he traveled once again to visit a friend's sick wife in Realmont, where he died on July 30, 1566 (Kingsley, 1902).

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