Leonardo da Vinci (1452–1519) is the epitome of a Renaissance man (1–3). He created exceptional art. He had an immensely imaginative, enquiring mind. His ideas and inventions were often centuries ahead of others. Calling him a scientist might be inaccurate, but he certainly was one of the greatest dreamer-inventors of all times.

Leonardo da Vinci trained in Florence in the workshop of the eminent painter Andrea del Verrocchio (c.1435–1488). Then, in 1482 or 1483, he went into the service of Duke Ludovico Sforza in Milan. In Milan, da Vinci painted The Last Supper on the refectory wall in the Dominican convent of Santa Maria delle Grazie. The painting soon achieved widespread fame and by the 17th century had been commented on as “a very great miracle” (4). During this period he also painted the portrait of Cecilia Gallerani, which is known as Lady with an Ermine. This painting was recently brought to London from Krakow for the exhibition “Leonardo da Vinci: Painter at the Court of Milan” at the National Gallery (5).

Leonardo spent about a decade at the Sforza court. At that time, the Italian city-states entered a politically turbulent period. The French invaded the Italian peninsula, and Florence became a republic after expulsion of the Medici family. The invasion of Milan in 1499 forced Leonardo to return to Florence. He became itinerant: he kept returning to Milan, traveled in Italy in 1502 and 1503 while in the service of Cesare Borgia, and stayed in Rome for a time. In Florence, over a period of several years, he painted the Mona Lisa, a portrait of the wife of Francesco del Giocondo. When Milan fell again to the French in 1516, he entered into the service of Francis I, the king of France, and left Italy. He died in Clos Lucé in France.

The earliest account of Leonardo’s life is included in Lives of the Artists, written by Giorgio Vasari. The first edition was published in 1550, and the enlarged second edition appeared in 1568 (6). Since then, there has been a constant stream of works devoted to his life and oeuvre, with the book by Kemp probably being the latest (7).

Vasari presents Leonardo da Vinci as a precocious genius; however, Leonardo was also formed by the environment of the culturally vibrant Florence of the 1470s, then a major center of the arts (8). Eminent artists Domenico Ghirlandaio, Pietro Perugino, and Sandro Botticelli were associated with the Verrocchio workshop. The workshop provided an exceptionally wide range of artistic training. In addition, Florence was the place of a discovery that had a seminal impact on the visual arts—that of linear perspective. There was also the tradition of multidisciplinary pursuits, exemplified by artists-architects from Giotto di Bondone to Filippo Brunelleschi. Similarly, Leonardo later adopted such dual identity by presenting himself to future sponsors as a military engineer.

Leonardo’s legacy is his paintings, his preliminary cartoons, and the collection of manuscripts known as “the notebooks,” which were compiled mostly after his death, frequently from loose notes (7, 9). Only 15 of his paintings have survived; on the other hand, the notebooks consist of thousands of pages.

The key characteristic of Leonardo’s approach was meticulous technical and intellectual preparation of his painting projects. First of all, he was an almost obsessive observer of the human figure. The notebooks show his fascination with shape, movement, and the proportions of the human body (9, 10). A Bald Fat Man with a Broken Nose in Profile (Fig. 1) is an example of this. The drawing comes from the Royal Collection at Windsor (11) and is one of thousands of images of people of all shapes, sizes, and ages that Leonardo drew, building and perfecting his vast “database.” Underlying this was his deep interest in anatomy, which he studied in a focused way to understand human shape and function. In addition, his notes include comments on the theory of painting and considerations of light and shade, proportion, geometry, and color. From a technical point of view, his painting was revolutionary because of his introduction of the chiaroscuro (light and shade) technique and new ways of composition (1). Kemp elegantly analyzed The Last Supper to show the intricacies of Leonardo’s planning and construction of the picture (12). Vasari, describing one of his works, said, “there is...
Leonardo inhabited the pre-science period, but his commitment to meticulous observation and recording in the context of creative work made him one of the lasting role models for both the arts and science. An interesting—and not necessarily a tongue-in-cheek—question comes to mind: would a person like him survive in today’s output-oriented academia?

Author Contributions: All authors confirmed they have contributed to the intellectual content of this paper and have met the following 3 requirements: (a) significant contributions to the conception and design, acquisition of data, or analysis and interpretation of data; (b) drafting or revising the article for intellectual content; and (c) final approval of the published article.

Authors’ Disclosures or Potential Conflicts of Interest: No authors declared any potential conflicts of interest.

Acknowledgment: The author thanks Jacky Gardiner for excellent secretarial assistance.

References


DOI: 10.1373/clinchem.2012.181974