



# Marc'Antonio Della Torre and Leonardo Da Vinci: an encounter that changed the history of medicine, art and anatomy

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## Introduction

Marc'Antonio Della Torre (1481–1511) from Verona (Fig. 1 and Cover) was a distinguished renaissance physician, probably descendant of the noble family of Della Torre from Milan, professor at the University of Padua where his father Girolamo (1444–1506) also held a chair in Medicine. In 1509 Della Torre was appointed to the chair of Medicine of the University of Pavia as professor of anatomy. It was in Pavia that Marc'Antonio met for the first time Leonardo Da Vinci (1452–1519) and, according to Vasari (1511–1574), provided a decisive help to the great artist's anatomical research. A fruitful and productive collaboration developed between the young brilliant academic anatomist and the more senior and renowned genius who was passionate about the study of the anatomical forms and had previously performed anatomic dissections [1].

Leonardo did several drawings on the limbs' movement with a pen and collected over 80 of these with the intent of publishing them in an anatomical treatise. He performed these cadaveric sections in Vaprio d'Adda, in the villa of his pupil, the earl Francesco Melzi, descendant of a noble and ancient family from Milan. Unfortunately, he did not manage to publish the collection and left it to Francesco Melzi. Francesco's heirs sold the collection to the sculptor Pompeo Leoni (1533–1603), and today the drawings are kept in the Windsor's Royal Museum and form part of the private collection of the Royal family [2–5].

In this article, we want to represent the life of the brilliant physician Della Torre, born and raised in Verona from an illustrious family, surrounded by the cultural climate of the Republic of Venice of that period, and the impact that his encounter with the unique genius of Leonardo Da Vinci had on the history of medicine, art and anatomy [6, 7].

## Leonardo da Vinci theologian?

Leonardo da Vinci (Vinci, 1452–Amboise 1519) is the recognised absolute polyhedric genius of the Renaissance (Fig. 2). He is desired, contended, celebrated and imitated. He is not just a painter but also an architect, a sculptor, a drawer, an essayist, a scenographer, a botanist, a musician, an engineer, a designer and an anatomist. The whole world knows his major works, such as *The Gioconda* (1503–4, Louvre), the most famous portrait in the history, and *The Last Supper* (1495–1498, housed by the refectory of the Convent of Santa Maria delle Grazie, Milan), the most recognisable painting of the Renaissance [8–10, 12].

Leonardo is the heir of the fifteen century Florentine tradition, which had set the issue of the artistic representation as knowledge. He was persuaded that the artist should reach the deepest experience of the reality surrounding him and he did not conceive the scientific investigation as detached from or in opposition to the work of the artist, but complementary to it and with the common aim of unveiling the laws of the nature and the universe. The intimate connection between the human being and the nature, between micro and macrocosmos, and the flow inside them of the same energies, are reiterated in his painting works [11].

The vast majority of Leonardo da Vinci's works are undoubtedly sacred art. The path leading Leonardo to a deep religious vision of the cosmos is indeed the study of the nature [13]. The School of Leonardo was the creation and the creation he loved and explored in all aspects. His research on the nature has nothing in common with the alchemic

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**Fig. 1 and Cover** The cover picture shows Marc'Antonio Della Torre (1481–1511) from Verona. Marc'Antonio Della Torre (Turrianus). Line engraving, 1688. Wellcome Collection. Wellcome Library no. 9215i

wisdom but was more in line with the Aristotelian and scholastic natural philosophy evolving towards a scientific vision which is not in antithesis with religion [11].

Leonardo is a theologian for his ability to represent the beauty of the human being and the universe of which he is part of. The whole of his painting production appears like a hymn to the Creator, and it often represents scenes of the incarnation, which is the core of Christian salvation. In order to realise his drawings on human body—fundamental step for the knowledge and cure of the same—he starts looking for a brilliant physician a true anatomist. He found Marc'Antonio Della Torre, the greatest physician of the time according to the historian of art Giorgio Vasari. When Marc'Antonio died prematurely after contracting the plague from his patients, Leonardo, learnt the news, exclaimed: “I lost in one shot a friend, a pupil and a master” [14].

### Marc'Antonio Della Torre

Marc'Antonio Della Torre (Verona, 1481–Riva del Garda, 1511 o 1512) was the son of Girolamo, notorious professor of medicine at Padua University, and Beatrice Benintendi, of a



**Fig. 2** Leonardo da Vinci, portrait of himself as an old man (1512). Red chalk on paper (33.3 cm x 21.6 cm), Royal Library of Turin

Veronese noble family. Giuseppe Cervetto citing Paolo Giovio (1483–1552), a Della Torre pupil in Pavia, writes: “Della Torre was born from that illustrious family which rules the region of Lombardia since over 200 years; the father, excellent and famous professor of Medicine, so it is not surprising that he was initiated from the young age to the same discipline, much more mature of anybody else who reached the highest honours in Padua and Pavia [15]”.

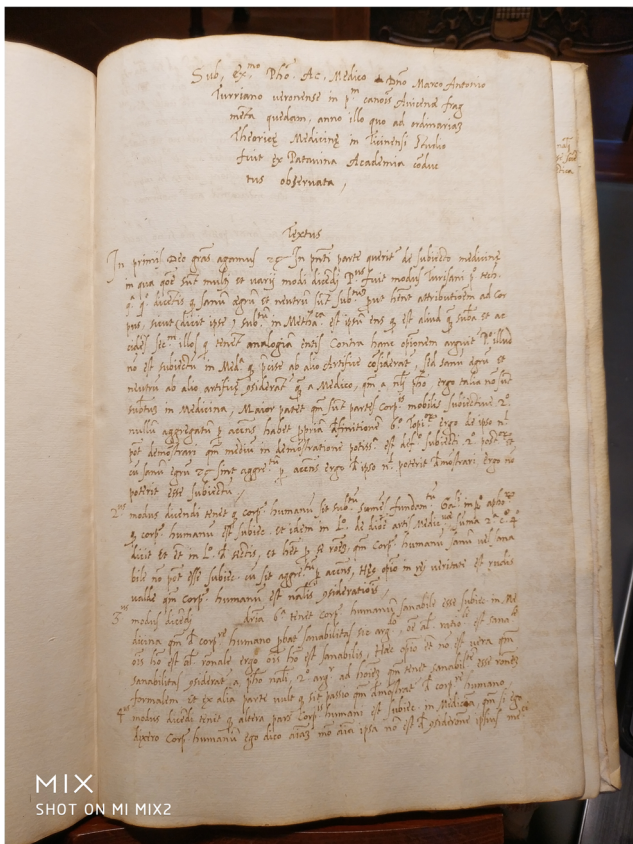
In 1501, Marc'Antonio, under the guide of Gabriele Gerbi (1445–1505), famous physician of Verona, graduated in Medicine and Philosophy (at the time in order to graduate in medicine, it was compulsory to undertake 3 years of literature and philosophy—*artibus*—followed by 2 years of medical studies) and began teaching extraordinary theoretic medicine for which he was already lecturer since 1445, reaching soon a leading role at the University of Padua.

In 1509, following the venetian defeat in the battle of Agnadello against the League of Combrai, Padua was invaded by the imperial troupes and the university was closed (it will reopen only in 1517), and Marc'Antonio moved to the University of Pavia. Cervetto says that he was very fond of his young students and used to repeat them the famous Galileo's said: “abandoned all the deceptive pleasures to fully dedicate to the study of the noble arts...no one will ever be a great physician without being first a great philosopher” [16].

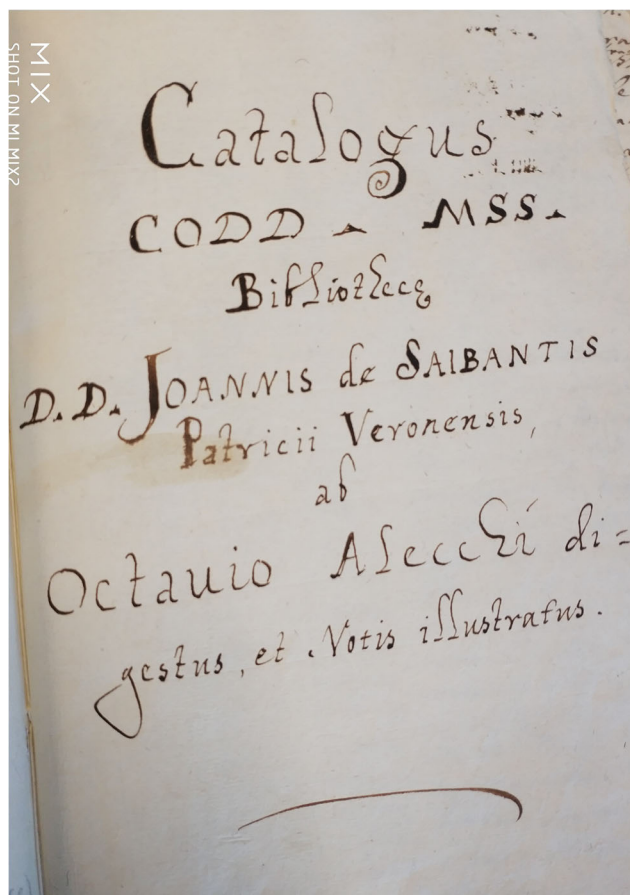
We have a precious testimony of his teaching in Pavia in a manuscript of 1510 preserved in in the Ariosteia library in Ferrara and containing the lessons of Della Torre written by one of his students, Antonio Maria Canani (Fig. 3).

According to Cervetto, he was called in Riva del Garda, close to Trento, in October 1511 due to a severe epidemic (plague or typhus) and fell victim of the disease dying at only 30 years in 1511 (or 1512) in Riva del Garda, in his own villa, a place where he loved to retire to rest after his numerous professional travels. A friend who shared his sojourn in Pavia, the earl Nicolò d’Arco, wrote these verses: “Oh Verona, once the flower of Europe and Asia, only loved physicians ‘mother, thou did not heat up the cold corpse of your son, but Riva bathed by the waters of the Benaco [15]”.

Due to his premature death, Della Torre could not print his manuscripts, and most of his works went lost. In the Code CCCVII (282) preserved in the Biblioteca Capitolare in Verona, known as the Saibanti Code [17], there is a Collectanea Medica that Gerolamo Mantua, one of the pupils of Della Torre in Pavia, transcribed in 1510 from the voice of the master (Fig. 4). Scipione Maffei (Verona, 1675-1755) writes about this code, saying that Della Torre was the first to treat and illustrate anatomy from live cadaveric dissections with writings and public demonstrations [6].



**Fig. 3** Lessons of Della Torre written by one of his students, Antonio Maria Canani, manuscript of 1510 preserved in in the Ariosteia library, Ferrara



**Fig. 4** The Saibanti Code, Code CCCVII (282) preserved in the Biblioteca Capitolare in Verona. Collectanea Medica that Gerolamo Mantua, one of the pupils of Della Torre in Pavia, transcribed in 1510 from the voice of the master

Vasari, in his work “Lives of the artists”, says that Della Torre greatly helped Leonardo da Vinci because he gave light to the anatomy until then shrouded in the darkness of ignorance [1]. On request of his relatives and the Collegio Medico Veronese, Della Torre’s remains (father and son) were translated to the Church of San Fermo and Rustico in Verona and entombed together in the mausoleum today still visible carved between 1516 and 1521 by Andrea Briosco (1470–1532) known as il Riccio.

**Della Torre funeral monument in San Fermo Maggiore**

Giulio, Giambattista and Raimondo Della Torre wanted to honour their father Girolamo and their brother Marc’Antonio. Therefore, they commission Andrea Briosco, known as “il Riccio” to build a funeral monument inside the Church of San Fermo (Fig. 5). Il Riccio built the funeral monument between the 1516 and the 1521, and this work is considered the masterpiece of his artistic maturity [18]. Della



**Fig. 5** Façade of the Church of San Fermo Maggiore in Verona



**Fig. 6** Della Torre Funeral Monument, Church of San Fermo, Verona

Torre mausoleum is made up of two overlapping spaces. Inside, an underground room with barrel vaults (not accessible), named “camerino”, where there are two tombs belonging to Domenico (1357) and Francesco (1667) Della Torre. In the upper room, slightly secluded from the church complex, in an ambience of rare refinedness, there is the mausoleum of Girolamo and Marc’Antonio Della Torre (Fig. 6). The fifteenth-century space has a simple and linear structure with vaulted ceiling as corners. The mausoleum, il Riccio’s sole work in Verona, is made up of a double step base at the bottom. A burial-chest and four columns with Ionic capitals, adorned with wreath, puttos and relief eagles, are positioned above the base. On the burial-chest’s sides are placed the Della Torre’s crested shields and on the front are placed the tombstones with dedicatory epigraphs. The columns sustain a marble surface with four bronze sphinxes at the corners. The sphinxes, in turn, support the upper coffer in which are inserted eight bronze panels. On the top of the monument there is an aedicula containing small bronze pictures of Girolamo and Marc’Antonio Della Torre facing opposite sides. The eight bronze panels, decorating the upper coffer, form an iconographical cycle not just to honour the deceased, but also to illustrate his pagan concept of life, death and the afterlife. In every panel can be noticed a remarkable harmony in the arrangement of the illustrations, an intense expressiveness and rigorous formal order (Fig. 7). In 1797 the eight

panels were removed by Napoleon, and since 1798, the panels become part of the collections of the Louvre Museum. Paolo Brenzoni, an aristocrat from Verona, went to Paris twice (in 1852 and in 1858) asking for their return. He only obtained some copies realised through the technique of electroplating (at that time an innovation). The use of the faithful copies prevented the mutilation of the most important part of the



**Fig. 7** Detail of the second panel of the funeral monument. The illness: Girolamo naked and exanimate, is laying down on a triclinium, held by the three Parcae or Moirae (Cloto, I spin; Lachesi, Destiny; Atropo, inflexible)

mausoleum, allowing the complete interpretation of the monument. However, it is a pity the lack, in situ, of such a valuable bronze work.

### The Medical and University environment in Verona and Padua during the fifteenth and sixteenth centuries and the role of the “Serenissima Republic of Venice”.

Since the Caroline age in Verona, there was a school, *La Cattedrale*, where philosophy and medicine were taught. The presence of this school is confirmed by the emperor Lotario. According to G. Cervetto, in 1270, in Verona, Guglielmo da Saliceto taught anatomy publicly [15]. In 1320, Pope Benedetto XII, with his bull “In medicina et artibus idoneos judicare, eosdemque magistri titulo decorare” approved the teaching of medicine and the professional training of it. Therefore, a school that could award the title of doctor (the degree in medicine) and the title of lecturer in medicine. In 1465, Verona’s university was ranked seventh among the 29th most important universities in the world and before Padua [15].

Marco Antonio Cocchio (known as Sabellico, 1436–1506) referring to the reputation of Verona’s school of medicine, says: “Mother of brilliant minds, sacrarium of literature, place to whom Italy owes its fame more than Athens towards Greece. That, took great minds from elsewhere, too, instead sent to others” [15, 16]. During the fifteenth and sixteenth centuries, Verona’s Collegio Medico produced a great number of illustrious doctors that became also professors in several universities. Cervetto mentions some names in his written work; the most famous (although many others brought

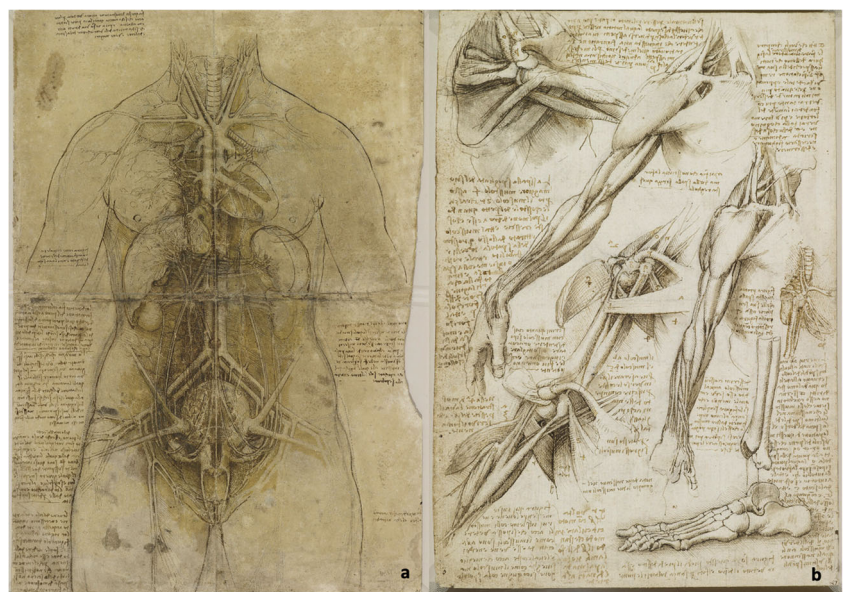
prestige to the city of Verona) are Cernusone, professor in Pavia and Padua during the first half of the fifteenth century; Giovanni Arcolano, personal doctor of the duke Borso d’Este in Ferrara and professor in Ferrara’s University; Pietro da Sacco, professor in Bologna; Gabriele Gerbi who taught Marc’ Antonio in Padua; Giambattista de Monte, professor in Padua, considered the first clinician; Alessandro Benedetti, professor of anatomy in Padua who was the first to build there an anatomical theatre in 1494; Francesco Pindemonte, personal doctor of the king of Naples; Nicolò Leonicensi; Girolamo Della Torre; Marc’Antonio’s father; and the most well-known, Girolamo Fraacastoro [16].

The meeting between Leonardo da Vinci and Marc’Antonio Della Torre happened during the short period in which Marc’Antonio lived and taught in Pavia between 1509 and the year of his death, and it was probably a fluke, facilitated by another unforeseen event: the military defeat of Venice against the Holy Roman Empire and as a consequence of the occupation of the majority of Serenissima’s territories, in particular the territory of Padua, that remained under German domination until 1517, during which the university was shut down. The only chance for Della Torre to continue his academic activity was to accept the invitation to move to Pavia. In those years, also Verona fell under the imperial domination.

Leonardo was in Pavia during the same period hosted by his favourite apprentice, the count Francesco Melzi. In Melzi’s villa, located in Vaprio d’Adda, Leonardo portrayed around eighty cadaveric sections. He then collated these works with others with the intent to publish them, but he did not manage it, and he bequeathed all his precious works to the count.

Francesco Melzi’s heirs, in turn, sold Leonardo’s drawings to Pompeo Leoni, a sculptor and medallist from Milan. Pompeo Leoni divided Leonardo’s collection and sold some

**Fig. 8 a–b** Cadaveric sections. Two of Leonardo’s drawings of Melzi’s collection, Royal Collection Trust, Her Majesty Queen Elizabeth II



drawings separately probably to get more money from their sale. Eventually, the group of drawings realised in Pavia with Marcantonio as a sector, remained together and in the first years of '600 they were purchased by Charles Stuart, king of England, becoming part of his private royal collection. The current owner is the Queen Elisabeth II (Fig. 8 a-b).

## The Encounter of Leonardo and Della Torre

Vasari, in Leonardo's life, writes regarding the encounter between Leonardo and Marc'Antonio Della Torre: "he (Leonardo) dedicated himself with great rigour to human anatomy, with the assistance of Messer Marcantonio Della Torre, excellent philosopher who taught in Pavia and wrote about this subject and was one of the first to start the illustration of medical topics referencing to Galeno's doctrine. Marcantonio Della Torre also made splendidly use of Leonardo's talent who created a book drew with red pencil and traced with pen...the majority of these drawings portraying the human anatomy are in possession of Messer Francesco de Melzo, nobleman from Milan dear to Leonardo..." [1]. William Hunter, a Scottish physician and anatomist, who had the opportunity to see directly Melzi's code in the King's library during King George's reign, highlights Della Torre's influence and writes: "Leonardo is worth of praise because of his precision and diligence when he illustrates even the smallest parts of the muscles and the features of the human body that he studied in Pavia under the supervision of the philosopher Marc'Antonio Della Torre" [19].

Cervetto describes the importance of the encounter between the anatomist and the artist [16]. He explains how this encounter played a crucial part in the history of art from the sixteenth century onwards because it led to the renaissance of these two intertwined disciplines: anatomy and art of painting. The first investigates the most intimate parts of the human body peered into the deep mysteries of nature, and the latter strives to represent human nature to the senses with flattering authenticity. If Leonardo achieved that anatomical perfection, it was also thanks to the collaboration and the anatomical dissections performed with Della Torre [16].

Melchiorre Missirini (academic and biographer of Canova) in his praise of forty illustrious Italian men, referring to Leonardo, affirms that "he was able to combine the art with the knowledge of physiological anatomy thanks to Della Torre" [8].

Famous examples of encounters between artists and anatomists will be Michelangelo Buonarroti and Realdo Colombo and William Hunter, Scottish physician and anatomist, who was helped by the painter Jan van Rymdyk to illustrate his anatomical dissections. Other great artists such as Durer,

Rubens and Guido Reni had contacts more or less lasting with notorious anatomists of their time. The connection between Marc'Antonio and Leonardo represented the beginning of a collaboration that helped the artist to overcome the limitations of the study of anatomy thanks to the help of an experienced anatomist [7].

Leonardo, later on, performed anatomical dissections not respecting the precise instructions of the Church. Thanks to this, the study of human anatomy became one of the core disciplines of the schools of art starting from the sixteenth century, first of all, the school of art of Florence.

## Declarations

**Conflict of interest** On behalf of all authors, the corresponding author states that there is no conflict of interest.

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