

The history of Bologna University's Medical School over the centuries. A short review

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S U M M A R Y

The foundation of the Medical School of the Bologna University was a rather longer lasting process. The beginning goes back to the year 1063. The title teacher appeared after the year 1170, while such a title could have been obtained by the church authorities since 1179. The city statutes for medicine date back to the year 1378. Many prominent personalities had contributed with their activities through the centuries to the celebrity of Bologna University.

The Bologna University is recognized worldwide to be the oldest in the world, so that it is referred to as "Alma Mater Studiorum". There is no precise foundation date because as Carducci said on the occasion of the 800th anniversary, "The University assembled autonomously and expanded privately" (1).

The oldest note dates back to a notary act of 1063, to judges Alfredus and Stephanus and to the notary act of 981, which referred to a doctor, called Petrus (2). Was he a teacher? Perhaps he was like Bonandus in 1075 and Martinus in 1083. The "teacher" title appears only after 1170 for Martino, Guelfo, Morando, Grillo, Jacopo da Bertinoro and others (3). We must consider that the University of Bologna was born as a free association, private and secular. This was the result of the association of an active and productive society, as opposed to the nobility of the rural feudalism (2). There were private

contracts between famous professionals and groups of students who chose such a person as a 'teacher'. Such a title could be obtained by anyone as long as a request was made to the church authorities (disposition of 1179) (4).

Naturally, many details related to the site of the school, furnishings, heating, the books, and to the recognition of the degree remain unanswered. Direct confrontation between the two parties resolved individual problems (2). Generally, the teacher requested payment that included expenses required to run the school. In some cases the teacher would also house students. Students, in need to defend their own interests, their relationship with the City Hall and citizens, money exchange, etc., would organize themselves in groups called the "Universitates". There was one for lawyers and one for artists, which included Medicine (5).

K E Y W O R D S

**Bologna,
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The "Universitates" were subdivided into "Nationes". The School of Medicine had four; the "Ultramontani" for students who came from towns beyond the Alps, and the "Lombardi", the "Toscani" and "Romani", for students according to the regions from which they originated.. Each "Nationes" elected one or two counselors who in turn elected the Dean. The Dean and Counselors would select the lecturers, fixed the terms and payment of the appointment, chose the books, whether they should be rented or purchased, and would be in touch with the City Hall (5). The lecturers, i.e. scholars, used to gather at the Council of Doctors. At the end of the four years of study, as was then required for Medicine, they conferred the doctor's degree. The title was recognized because the City was an independent State (5). These agreements created the basis for city statutes that became indispensable in the XIII century due to a great number of students, about 10,000 at the time, a third of Bologna's citizens. The city statutes for Medicine date back to 1378.

The interference of City Hall gained importance in managing the University's affairs: salaries of lecturers and assignment of rooms (no longer the teachers' home). In fact, City Hall transformed the University from free and private into a state-run body. Private schools continued to exist though less attended, because they were not recognized by the City Hall (5). These events marked the beginning of a crisis for the University. The Secular and the Ecclesiastical authorities imposed their interests on the University which fact limited its freedom of thought and research, in some instances blocking them completely. In the XI and XII century, Bologna's medical knowledge developed from Latin and Greek books. Arabic authors were also well known in Bologna thanks to the efforts of Emperor Frederic II and the Crusades in which the Bolognese army participated accompanied by their own doctors. There were also lecturers on Arab and Hebrew medical literature for a number of years (6). Their teaching included anatomy, physiology, pathology and therapy. Preparation of the Teriaca or Triaca was an important event in the city with the official participation of municipal and ecclesiastical authorities (5).

Anatomy was a great and traditional commitment for its teachers. Although the ethic-religious rules prohibited the dissection of corpses, it was a frequent secret practice. Precise anatomical descriptions found in Guglielmo da Saliceto surgical text books bear witness to this practice; for they could not be a simple translation of Alessandrini's texts (7). The problem had surgical relevance and in fact, several teachers who had written anatomical observations were surgeons, and thus they bestowed honor upon the position of "surgeons", which in past centuries had never been considered a scholarly degree.

Between the end of the XIII century and the beginning of the XIV, Mondino Dei Liuzzi who reopened the tradition of the Alexandria School, practicing vivisection, published his observations in an Anatomy book, used until the end of the XVI century, and in fact, began experimental research in Anatomy (8). After him, Alessandro Achillini, a follower of Averroes theories, studied the choledochus, colon and gall bladder. Berengario da Carpi was a surgeon, famous for his description of the appendix, thymus, the function of the cardiac valves, fractures, cranium, and the use of mercury to treat syphilis. Giulio Cesare Aranzio took interest in embryology (Arantius ducts) and vessels (Arantius bodies). In 1500, Varolio studied the encephalus (pons Varolii); Gaspare Tagliacozzi began plastic surgery. Girolamo Cardano, a mathematician and a good doctor practiced ureterotomy and external nephrectomy. Gerolamo Mercuriale translated Hippocrates and was interested in Hygiene, Toxicology, Pediatrics and Ophthalmology. In the XVII century, Giorgio Scharpius, already famous in Montpellier (France), and the Irishman, Neil Glacon, who transferred himself from Toulouse (France), taught at the Bologna University. The period became famous due to Marcello Malpighi, supporter of the experimental methods. He used the microscope to study the capillaries of the pulmonary alveolus, corpuscles of the kidney, corpuscles of the spleen, mucous bodies and epidermal follicles. His student, Antonio Maria Valsalva, investigated the ear, colon, vagus and created the "maneuver of Valsalva" (3, 4).

The great number of students that came from many Italian regions and from abroad favored the creation of colleges. Some of the oldest colleges date back to 1257 and the most recent one was established in 1857. There were separate colleges established for Italian students from Bologna, Reggio, Parma, Lucca, Genova, and Piedmont. There were also colleges established for students from abroad: Avignon, Gregorian (for needy students from Limoges), former Yugoslavia, Hungary, Flanders and Spain (the latter still exists). The Collegium Hungarico-Illiricum existed from 1557 to 1781 (9,10).

The XVIII century witnessed the most critical period of the University because of the loss of every freedom, even that of thought and the prerogatives to appoint teachers. Favored were the citizens of Bologna, thus eliminating fair competition. Regardless of this situation, three brilliant women gave luster to the School of Medicine, Laura Bassi, Marina Gaetana Agnesi and Anna Morandi Marzolini who created anatomical models following Valsalva's instructions. Their models are on display in the museum of the Institute of Human Anatomy. Emilio Lelli's famous skinless anatomical models are in the Archigimnasio Theater of anatomy. Here, above the podium, one can see the window from which the person appointed by the Church would check on the teachers'

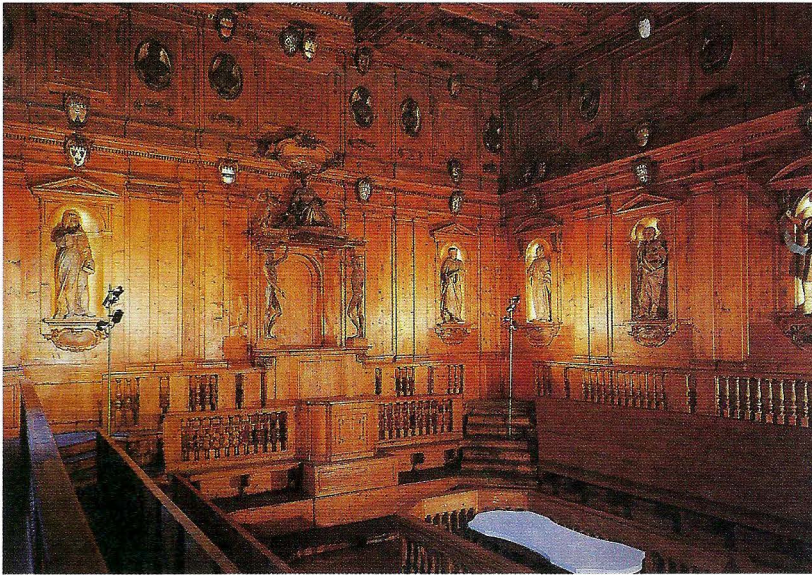


Figure 1. Anatomical theatre in the old Bologna University, 16th century

lessons without being seen.

The crisis ended with the help of Luigi Ferdinando Marsili, a member of the Royal Society of London, who also founded the Academy of Sciences at the University

(1). The Academy became well known and was recognized internationally, it cooperated with other Societies and Scientific Academies such as the Royal Society of London and France's Academy of Science. Bologna University's Academy was famous in the fields of Mathematics, Astronomy, Physiology and Biology. The famous textbook "De viribus electricitatis in motu musculari" was published by Luigi Galvani (1).

In the Napoleonic era, old ordinances were abolished and the University became national. The old teaching hospitals, such as that of Life and that of Death, had already given way to the Maggiore Hospital. When the Medical School was reorganized at the beginning of the 1800's, many professorship positions for the different specialties became available (1). Their respective research institutes were transferred to the Saint Orsola Hospital where the clinical departments were located. Over the years the medical department became well known thanks to Augusto Murri. The Orthopedics Clinic, located in the prestigious Rizzoli Hospital, reached international fame thanks to the work of Alessandro Codivilla and Vittorio Putti.

The newer history of Bologna University will be dealt with in another manuscript, which is being prepared.

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