

Augusto e Jaime Celestino da Costa: Personal Libraries at Nova Medical School

Teresa Costa ^{1,2}, Sofia Serra ^{1,2}, Ricardo Cunha ¹, Pedro Firmino ¹

¹ Nova Medical School | Faculdade de Ciências Médicas, Universidade Nova de Lisboa, Lisboa, Portugal

² Centro de Estudos Clássicos, Faculdade de Letras, Universidade de Lisboa, Lisboa, Portugal

✉ Corresponding author:

Teresa Costa

Email: teresa.costa@nms.unl.pt



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ABSTRACT: Augusto Celestino da Costa, a renowned histologist, and his son Jaime Celestino da Costa, a distinguished surgeon, represent two generations of prominent portuguese physicians. This study examines their personal libraries, which were donated to the Nova Medical School, Universidade Nova de Lisboa, and are now held with restricted access at the institution's library. Using a mixed-methods analysis that integrates both quantitative and qualitative data derived from the bibliographic catalogue, we examined 1,884 volumes comprising 1,578 unique titles, primarily in the fields of Histology, Embryology, and Cardiothoracic Surgery. The works span from 1690 to 2009 and are written in Portuguese, French, English, and Spanish. Our analysis provides insight into the professional interests and intellectual environments of both physicians, shedding light on the evolution of medical knowledge and education in Portugal. These collections also serve as valuable historical sources for understanding the development of medical sciences in the country.

KEY WORDS: Augusto Celestino da Costa; Jaime Celestino da Costa; Personal library; Medical library.

AUGUSTO CELESTINO DA COSTA

Augusto Pires Celestino da Costa (Figure 1) was born in Lisbon on April 16, 1884, into a family of Azorean descent. He was the son of Pedro Celestino da Costa (1852–1910), an infantry officer, and Maria Luísa Amélia Pires da Costa (?–1887). After his mother's death when he was three years old, his father married Joana Figueira de Magalhães, who became like a mother to Augusto. She was the niece of Carlos May Figueira, a physician of the Portuguese Royal House, who would become his first mentor ^[1].

He married Emília Hermengarda Croner, with whom he had four children: Pedro Celestino da Costa, Jaime Celestino da Costa, Elisa Celestino da Costa and Augusto Celestino da Costa. He graduated in Medicine at Escola Médico-Cirúrgica.

gica de Lisboa, in 1905. He dedicated himself to a medical career, university teaching, and scientific research, specializing in Histology. He was a pioneer in the study of Embryology and Histology in Portugal.

Augusto Celestino da Costa was admitted to the first technical histology course in 1901, organized by Marck Athias, and soon became his disciple.

Regarding his choice of Histology, Augusto explains that: *"I chose Histology due to a series of fortuitous circumstances: the extraordinary interest by reading about the neuron theory in Testut, the opportunity to find a mentor in Athias—whose name seemed to me to carry an invincible prestige when I saw it cited abroad [...]; and the fact that I had in my family the man who was the first to practice microscopy at our school [...] Professor May Figueira."*^[2]

Augusto Celestino da Costa completed his medical degree with the dissertation *"Glândulas suprarenaes e suas homólogas: estudo cytologico"*^[3], demonstrating his skills as a researcher by analysing the foundations of the duality of the adrenal cortex and medulla and studying the cells of each of these structures.

He was affiliated with several national and international institutions throughout his career. In Portugal, between 1901 and 1906, he worked at the Laboratório de Histologia Rilhafoles, at the Hospital Miguel Bombarda, at Laboratório de Histologia da Escola Médico-Cirúrgica, and at the Laboratório do Instituto Bacteriológico Câmara Pestana. Abroad, with financial support from his great-uncle May Figueira, he studied at the Anatomisch-Biologisches Institut in Berlin (Germany) between 1906 and 1907. In 1908, he trained at the Pathologisches Institut des Moabit-Krankenhaus and the Hygienisches Institut at the University of Berlin.

In 1917, he undertook further training in Madrid (Spain) at the Laboratorio de Investigaciones Biológicas. Between 1917 and 1922, he studied at the Institute of Embryology in Utrecht (Netherlands) and the Institute of Anatomy and Embryology in Brussels (Belgium).

In 1910, the year of the establishment of the Portuguese Republic and the death of Miguel Bombarda (responsible for the Histology and Embryology classes), Celestino da Costa, at the age of 27, was chosen to lead the Chair of Histology at the Faculdade de Medicina da Universidade de Lisboa (FMUL). There, he founded the Institute of Histology and Embryology, of which he was director.

In 1932 he was appointed as the delegate of full professors to the University Senate. In 1935, he was named director of the FMUL, a position he held until 1942.

As a specialist in Embryology and Histology, Augusto Celestino da Costa published 383 works, including textbooks on Embryology, Histology, and Histological Techniques. In his own words: *"Celestino da Costa approached his teaching mission with the same passion he dedicated to scientific work, with the same meticulousness in its execution, striving for completeness and lasting influence"*.^[4]

This commitment led him to write several textbooks to meet the needs of his disciplines. In this context, his first published didactic work was entitled *"Noções de Technica Histologica"*^[5], followed shortly after by the *"Manual de Técnica Histológica"*^[6], written in co-authorship with Pedro Roberto Chaves (1887–1951). His book *"Elementos de Embriologia"*^[7] had several editions in Portuguese, Spanish, and French. In collaboration with Roberto Chaves, he also wrote the *"Manual de Histologia"*^[8], which quickly sold out and was published in three volumes as part of the *"Tratado Elementar de Histologia e Anatomia Microscópica"*.^[9]

He established a research school in Portugal that advanced three fields: Cytology, Embryology, and Histology. However, Celestino da Costa was not just a researcher and a professor; he was also an enthusiast of several other subjects. In fact, between 1913 and 1921, he was the technical director of the Vasco da Gama Aquar-



Fig 1. Augusto Celestino da Costa, seated at his desk in his library. Photograph from the personal archive of Augusto Celestino da Costa (NOVA Medical School library)

ium, which he sought to transform into a true marine biology institute. *“Celestino da Costa was a great researcher and professor of Histology and Embryology. But he was also a soul open to other scientific, spiritual, and human concerns. He was a true man of science, a cultured man in the broadest sense of the word, and a great and noble servant of Portuguese culture”.*^[10]

In 1929, the Junta de Educação Nacional (JEN) was established, and Augusto was elected vice president of what was the first generation of scientific agencies. In 1934, he assumed the presidency of the institution, a position he held for two years. In 1936, the institution was renamed Instituto para a Alta Cultura (IAC), and Augusto became its first president, a role he held until 1942. Born and raised in Lisbon, he was deeply interested in his city and its history, being elected president of the local group “Amigos de Lisboa”. Augusto Celestino da Costa was a member of several national and international scientific societies. He was a founding member of the Sociedade das Ciências Naturais, the Archives Portugaises des Sciences Biologiques, the Sociedade Portuguesa de Biologia, the Sociedade Portuguesa de Endocrinologia, and the Sociedade Portuguesa de Anatomia. He also served as president of the Sociedade das Ciências Médicas de Lisboa. Celestino da Costa died at the age of 72 on March 26, 1956, in Lisbon, shortly after he presented a review paper on the embryology of the sympathetic nervous system^[11] at the 43rd meeting of the Association des Anatomistes event (Figure 2).



Fig 2. Last photograph of Augusto Celestino da Costa.

Photograph from the personal archive of Augusto Celestino da Costa (NOVA Medical School library)

JAIME CELESTINO DA COSTA

Jaime Celestino da Costa (Figure 3), son of Augusto Celestino da Costa, was born in Lisbon on September 16, 1915. Influenced by his father, he chose an academic, scientific, and professional career in Medicine.

Jaime was an important figure in Portuguese cardiothoracic surgery in the 20th century, being one of the founders and president of both the Sociedade Portuguesa de Cirurgia and the Sociedade Portuguesa de Cirurgia Cardiorráctica e Vascular.

According to Godinho, *“Professor Jaime Celestino da Costa was one of the most outstanding figures in 20th century Portuguese Medicine and Surgery. He belonged to a select group of individuals who stood out in our country for their intelligence, culture and outlook on problems. Endowed with great intelligence, a solid preparation, and vast culture, enlightened and well-travelled, lover of the arts in their various forms – literature, painting, music that he also performed – and still an expert in horsemanship - he was an excellent surgeon, a born organizer and a remarkable teacher”.*^[12]

After attending the Liceu Pedro Nunes (1925–1932), Jaime Celestino da Costa enrolled in the Faculdade de Medicina de Lisboa, established in 1911 at Campo de Santana and associated with the Hospital Escolar de Santa Marta. Jaime Celestino da Costa graduated in July 1938 during a period when his father was the director of the institution.

In 1940, he went to Paris to work as an intern at the Institut Curie, a private, non-profit foundation dedi-



Fig 3. Jaime Celestino da Costa at the end of his medical course in 1938.

Photograph from the personal archive of Jaime Celestino da Costa (NOVA Medical School library)

cated primarily to oncological research, where he carried out an important part of his doctoral thesis.

In 1941, he began his academic career as an Assistant in Operative Medicine and Surgical Anatomy, and in 1944, he became Assistant of Professor Reynaldo dos Santos (1880–1970) in Pathology and Surgical Therapies. In 1945, at the age of 30, he completed his doctoral thesis at the Faculdade de Medicina de Lisboa, entitled “*A Parede Arterial*”.^[13]

Jaime's professional career in Portugal began at the Hospitais Cívicos de Lisboa, where he became a surgeon in 1948^[14]. At the Hospital de Santa Marta, Jaime Celestino da Costa improved his surgical training with his mentor Reynaldo dos Santos. He also worked in the emergency department of the Hospitais Cívicos de Lisboa, gaining extraordinary experience as a surgeon.

In the same year he became an hospital surgeon (1948), cardiac surgery took its first steps, still with closed chest. At the Hospitais Cívicos de he performed his first cardiac surgeries: in 1951, a pericardial surgery; in 1953, mitral valve stenosis and patent ductus arteriosus.^[12]

In 1958, he was transferred to Hospital de Santa Maria, where he became Director of the Department of Surgical Propedeutics. He created, in 1959, a Center for Cardiac Surgery within the Department, with the support of the Gulbenkian Foundation. There he prepared to perform open-heart surgery with hypothermia, which first took place in Portugal in the early 1960s. Extracorporeal circulation cardiac surgery began at the same time at Hospital de Santa Marta (which was then the core of the Serviço de Cirurgia Torácica of HCL) and at Hospital de Santa Maria.^[15]

Jaime Celestino da Costa was also deeply concerned with hospital emergency care, writing on the topic, as exemplified by his work “*O problema da urgência na organização hospitalar*”^[16], in 1959. He also presented and published the results of surgical training interventions: “*Ensino e treino cirúrgicos*”^[17] and “*Uma experiência de ensino médico*”^[18].

In 1972, he became clinical director at Hospital Santa Maria, and in 1973, he was appointed full professor of Surgical Pathology and director of the department. Finally, in 1979, he was responsible for the Department of Cardiothoracic Surgery.^[12]

Jaime Celestino da Costa, while advocating for modern Medicine based on research and technical innovation, also believed in the concept of humanized Medicine, concerned with the doctor-patient relationship: “*Medicine is a profession that is both humanistic in na-*

ture and scientifically grounded. The humanistic aspect is the oldest tradition of clinical practice: it comes from the direct relationship between two personalities, the patient and the doctor.”^[16]

At international level, he was founding member of the European Society of Cardiovascular Surgery and an Honorary Member of the Society of Thoracic and Cardiovascular Surgery in Great Britain and Ireland.^[14]

He retired on September 16, 1985, after 44 years dedicated to teaching at the Faculdade de Medicina da Universidade de Lisboa (FMUL). However, he continued to contribute to Portuguese Medicine through his publications, which include “*Formação dum cirurgião: um ensaio sobre ciência e arte*”^[20], “*Um certo conceito da Medicina*”^[19], and “*A geração médica de 1911: origem, realização e destino*”^[21], essential works on the contemporary History of Medicine and Medical Education. He died on February 2, 2010, in Lisbon, at the age of 95.

METHODOLOGY

The initiative to study these collections arose from an activity conducted in 2023 at the library, which involved organizing an exhibition showcasing the early printed books held within the library's collections. At that time, it became apparent that the bibliographic holdings of these two collections possess a unique and historically significant value for the history of medicine in Portugal, warranting thorough study and dissemination.

To foster interest in the distinctiveness of these collections and their original owners, a case study was undertaken, utilizing the bibliographic catalogue of the FCM library. Accordingly, a biographical and bibliographical investigation of these two prominent figures in national medicine was conducted through comprehensive bibliographic and archival research, as well as an examination of their libraries based on content analysis, employing both qualitative and quantitative methodologies.

The biographical and bibliographical study of the owners of the libraries was primarily based on the analysis of the works contained within the library's collection. One of the main sources of information about Augusto Celestino da Costa was the work “*Augusto P. Celestino da Costa (1884–1956): A Crusade for Science*” by David-Ferreira and Tiago Brandão (2020). Equally important were the texts written by his son, Jaime Celestino da Costa, particularly those composed for the centenary celebration of his father's birth, as well as writings related to the Generation of 1911. These sources allowed for the con-

struction of a biographical portrait of Augusto Celestino da Costa's personal and professional life.

Regarding data collection, a report was exported from the library's catalogue, containing all the titles available in the personal library collections of Augusto and Jaime Celestino da Costa, which were donated to the FCM library. The report included the following information: registration number, document type, author, title, publication date, place of publication, publisher, subjects, language, country of publication, and notes mentioning dedications or other relevant information relating to each item.

For data processing, the report was exported to an Excel file, enabling the complementing of content analysis of the items in these collections using descriptive statistics and bibliometric techniques.

To present the results in a more structured and organized method, Excel was also used to create graphs and tables based on the collection's data.

Regarding the information collected about Jaime Celestino da Costa, it was primarily drawn from the book *"Um Certo Conceito de Medicina"*, authored by Jaime himself, whose preface, written by João Lobo Antunes, identifies the work as an autobiography.

STUDY OF THE LIBRARIES OF AUGUSTO AND JAIME CELESTINO DA COSTA

"My father presented us with a dual image: the man in the laboratory, immersed in his scientific and research environment, and the cultured man, symbolizes in his library-office (the heart of our family life) where, with fictional works, we found also history books and many biographies [...]. The day I had to help fall apart that library, I felt like a plant cutting its own roots, destroying its own habitat". [18]

The personal libraries of Augusto and Jaime Celestino da Costa comprise a total of 1.884 volumes, with 1.578 unique records. Many of the works in Augusto Celestino da Costa's library were inherited from his great-uncle, the physician May Figueira (1829–1913), a distinguished figure in 19th-century Portuguese medicine (Figure 4).

Many monographs include dedications to both Augusto and Jaime Celestino da Costa, often from prominent contemporary authors, most of whom were colleagues in the medical profession of these two distinguished figures in Portuguese medicine.

According to Jaime, his father was always reading, even while walking on the street. In this regard, Jaime writes: *"How many times did we see him arrive home while reading on the street, bumping into lamp-posts, which he would avoid without interrupting his reading; once, still reading, he climbed a pile of sand placed on the sidewalk and descended again without even noticing it". [18]*

Jaime also mentions: *"Celestino's intellectual curiosity was unstoppable and revealed itself in his ability to read, to read constantly. I can see him arriving home for lunch, after stopping by the Barbosa tobacco shop on Rua do Carmo, with a bundle of newspapers under his arm [...] or any new book. He always carried a small paper knife in his pocket to open the next book. He would sit at the table and... read. Many times, he didn't even know what he had eaten or noticed the desolate look on my mother's face, who had stayed at the table just to keep him company. He read at the table as he read on the tram (his transportation), in the street, on the train, at the beach, or in the countryside. He read as a professional duty for information and rested by reading during breaks from work. [...] The books were not well cared for. He would bend their spines and damage them: like the reader, the book did not matter for its cover; it was the spiritual content that counted. In the vast library of thousands of books, all of them had been read, and even without a catalogue, their places were known. And if he didn't find a book right away, the agitation in that office was almost unbearable! My father's reading capacity was just one expression of his extraordinary work ethic". [14]*



Fig 4. Bookshelf with the collections from the libraries of Augusto and Jaime Celestino da Costa, at NOVA Medical School library.

PRESENTATION AND DISCUSSION OF RESULTS

Subjects – Thematically, 81% of the library's collection focuses on Medicine, while the remaining 19% encompasses other fields such as Biology, Literature, Botany, and Zoology, among others. In terms of medical specialties, the most prominent are Histology (307 titles), Embryology (190), Endocrinology (94), Anatomy (68), and General Surgery (60), as illustrated in Figure 5.

Beyond these specialties, the collection also includes a significant number of works on the History of Medicine (136 titles) and Medical Education (65).

Publication Dates – Although most of the work date from the 20th century, the collections include more than 350 works published before 1901. The most ancient book is from 1690: "*Correcçam de abusos introduzidos contra o verdadeiro methodo da medicina*".^[22]

Countries and Languages – Regarding the languages of publication, as shown in Figure 6, there is a close balance between French (46%) and Portuguese (42%, both from Portugal and Brazil). There are works published in France, Belgium, and Switzerland.

Additionally, there are also works in English (8%), published in the United Kingdom and the United States, in Spanish (2%) from Spain, Argentina, Colombia, and Uruguay. Less represented are works in German (1%) and other languages, such as Italian and Latin (1%).

Authors – In addition to Augusto Celestino da Costa (345 works) and Jaime Celestino da Costa (92 works), the collections include works by important Portuguese authors, such as Luís Ernani Dias Amado (1901-1981) and Xavier Morato (1906-1989), each one of them with 29 works; Geraldês Barba (1917-1981) and Pedro Roberto Chaves (1887-1951), with 19 works; Luís R. Simões Raposo (1898-1934), with 14; J. Vasconcelos Frazão (n.d.), with 13; Reynaldo dos Santos (1880-1970), with 11 works; and Egas Moniz (1874-1955), with 10.

As far as foreign authors are concerned, we can mention Charles Robin (1821-1885), with 17 works; Claude Bernard (1813-1878), with 11; Charles-Polydore Forget (1800-1861) and René Leriche (1879-1955), each with nine; Santiago Ramón y Cajal (1852-1934), with seven; F. Xavier Bichat (1771-1802) and Gregorio Marañón (1887-1960), each with six; and Julian Huxley (1887-1975) and Pierre Flourens (1794-1867), each with five.

Personal Libraries as a Reflection of Their Owners – The personal libraries of Augusto and Jaime Celestino da Costa reflect their personalities; curious and deeply dedicated to Medicine and its History, as well as to science, particularly in the case of Augusto Celestino da Costa. Both Augusto and Jaime were not only physicians but also professors, a career they embraced with the same passion and commitment they had for Medicine.

Fig 5. Number of works in the collections by medical specialty.

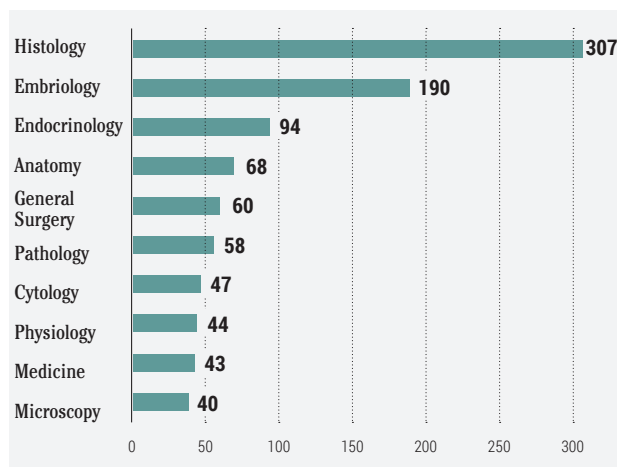
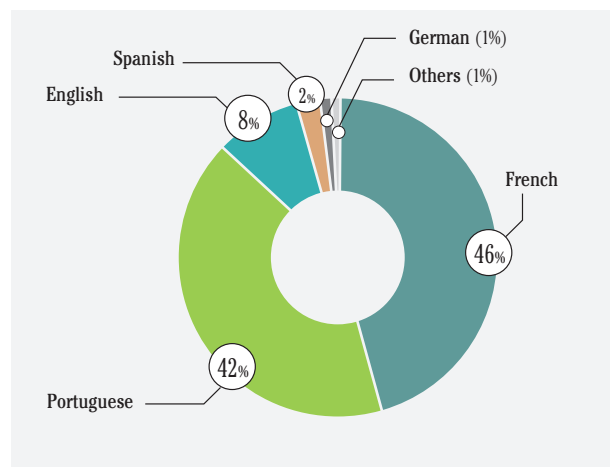


Fig 6. Percentage of works in the collections by language.



CONCLUSION

Personal libraries reflect the particularities and characteristics of their owners^[23]. The libraries analysed in this study exemplify this idea: as medical libraries, they highlight the specialties to which both Augusto and Jaime dedicated themselves. However, they also include works on other medical subjects, and several topics ranging from Biology, Zoology or Pharmacology to Medical Education, on which both also wrote.

These collections are important sources of information both for and about the History of Medicine, in addition to providing insight into the period in which their owners lived, thus holding documentary value.

Augusto Celestino da Costa was a man of science, and the positions he held enabled him to write about his aspirations for science in Portugal, which, in his opinion, was behind other European countries. Jaime, on the other hand, distinguished himself for works on the History of Medicine and Medical Education, to which he dedicated himself mainly after his retirement. Both also wrote biographies of prominent contemporary figures, often as tributes and to keep alive the memory of those they admired and respected.

These are the libraries of two inquisitive physicians with a deep appreciation for reading and culture.

This study aimed to explore and publicize this collection so that it may serve as the subject of further research in the fields of Medical History and information science.

To conclude, a curious fact: the library of the NOVA Medical School located in Campo de Santana, specifically on Rua do Instituto Bacteriológico, houses these two collections, which are of great value for the study of the History of 20th-century Medicine. This location was formerly known as the Instituto Bacteriológico or Instituto Câmara Pestana, where Augusto and Jaime Celestino da Costa contributed to the advancement of medicine in Portugal. While the Instituto Bacteriológico once provided research opportunities, today these collections await further dissemination and recognition of their historical significance.

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