

DR. ANTONI ESTEVE FOUNDATION: LEGACY OF A CENTURIES-LONG PHARMACEUTICAL TRADITION

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PALABRAS CLAVE

- Farmacia
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- Estirpe de farmacéuticos

ABSTRACT: Dr Antoni Esteve Foundation has been sensitive to the history of science during its trajectory of almost four decades. This sensitivity has been transmitted by the pharmaceutical tradition of the Esteve lineage, whose origin dates back to the mid-18th century. This article reviews the highlights.

RESUM. EMPREMTA D'UNA TRADICIÓ FARMACÈUTICA DE SEGLES EN LA FUNDACIÓ DR. ANTONI ESTEVE: Durant la seva trajectòria de quasi quatre dècades, la Fundació Dr. Antoni Esteve ha estat sensible a la història de la ciència. Aquesta sensibilitat li ha estat transmesa per la tradició farmacèutica de la nissaga Esteve, l'origen de la qual es remunta a mitjan segle XVIII. Aquest article revisa els fets més destacats del llinatge de farmacèutics i, en paral·lel, resumeix què és i quines aportacions a la història de la ciència ha liderat la Fundació.

RESUMEN. LA HUELLA DE UNA TRADICIÓN FARMACÉUTICA DE SIGLOS EN LA FUNDACIÓN DR. ANTONI ESTEVE: Durante su trayectoria de casi cuatro décadas, la Fundación Dr. Antoni Esteve ha sido sensible a la historia de la ciencia. Esta sensibilidad le ha sido transmitida por la tradición farmacéutica de la estirpe de los Esteve, cuyo origen se remonta a mediados del siglo XVIII. Este artículo revisa los hechos más destacados del linaje de farmacéuticos y en paralelo, resume qué es y qué aportaciones a la historia de la ciencia ha liderado la Fundación.

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INTRODUCTION

Since its inception 36 years ago, the Dr. Antoni Esteve Foundation has been firmly committed to investigating and disseminating the historical aspects of pharmacology in particular and of science in a much broader sense. As a nonprofit institution, it has organized diverse activities and has published various texts about many historical facts; these are summarized below.

Throughout its history, the Foundation has cultivated a set of fundamental values that define it as a scientific institution. Among the differential traits that set the Foundation apart, it is important to point out this institution's Catalan roots and long tradition of promoting high quality scientific activities both in Spain and internationally. This tradition is evident in the many activities and publications fostering multidisciplinary and transversal aspects of science that it has organized and sponsored in close collaboration with universities, hospitals, and research centers.

This recapitulation of the contributions of the Dr. Antoni Esteve Foundation initially highlights the history of the Esteve pharmaceutical lineage. The most recent members of this lineage have been and continue to be involved with the Foundation. The Esteve lineage's four-century-long pharmaceutical tradition has provided the Foundation with a unique perspective that enables it to tackle different initiatives related to the history of biomedicine.

LINEAGE OF APOTHECARIES FROM “CAL TOMASSET”

The Esteve family's ties to pharmaceuticals began in the 18th century with the birth of Tomàs Esteve i Gavanyach¹ (1753-1830) (Figure 1) 266 years ago and remain firm today. The lineage of apothecaries was established with the first two generations descending from Tomàs Esteve i Gavanyach. Originally from Urús in the Cerdanya, Esteve i Gavanyach trained as an intern in Francesc Florença's pharmacy in Puigcerdà and went on to study pharmacy in Barcelona. In 1787, he took the reins at the pharmacy in Sant Andreu Hospital in Manresa, where one of his great-great-grandchildren would work many years later. In 1824, when Esteve i Gavanyach was still alive, his son, Tomàs Esteve i Florença, opened his own pharmacy in Plana de l'Om Square in Manresa (Figure 2), known as “Cal Tomasset”. The year 1787 would mark the beginning of the tradition of Esteve pharmacists in Manresa that persists today in the historical pharmacy in this city.

Tomàs Esteve i Florença² (1797-1850) was at the head of the pharmacy throughout his life. The third generation in the Esteve lineage of apothecaries was constituted when one of his sons, Tomàs Esteve i Pla (1838-1890), succeeded him despite his poor health. Since he had no male descendants to take over the pharmacy, in accordance with the tradition prevailing at that time, his youngest brother, Antoni Esteve i Pla (1842-1916), known as Tonet, helped him. Not being a pharmacist himself and not being very interested in pharmaceuticals, Tonet supported his brother; Tonet's son, Josep Esteve i Seguí (Figure 1) ensured the continuity of the lineage of pharmacists from 1897. Tonet would also influence his son and his grandson in other ways, passing on his liberal mentality and republican convictions, as well as his love of nature and the countryside.

In the introduction to his book (1987), Ramon N. Cornet i Arboix defines the Esteve family's strong ties to Manresa very well when he says “Love for Manresa has been a constant feature in the lives of all Esteve family members, who have demonstrated this love through their participation in civic life and the public positions they have held while working hard in their pharmacy in Plana de l'Om Square, founded by the second Esteve in the lineage”.

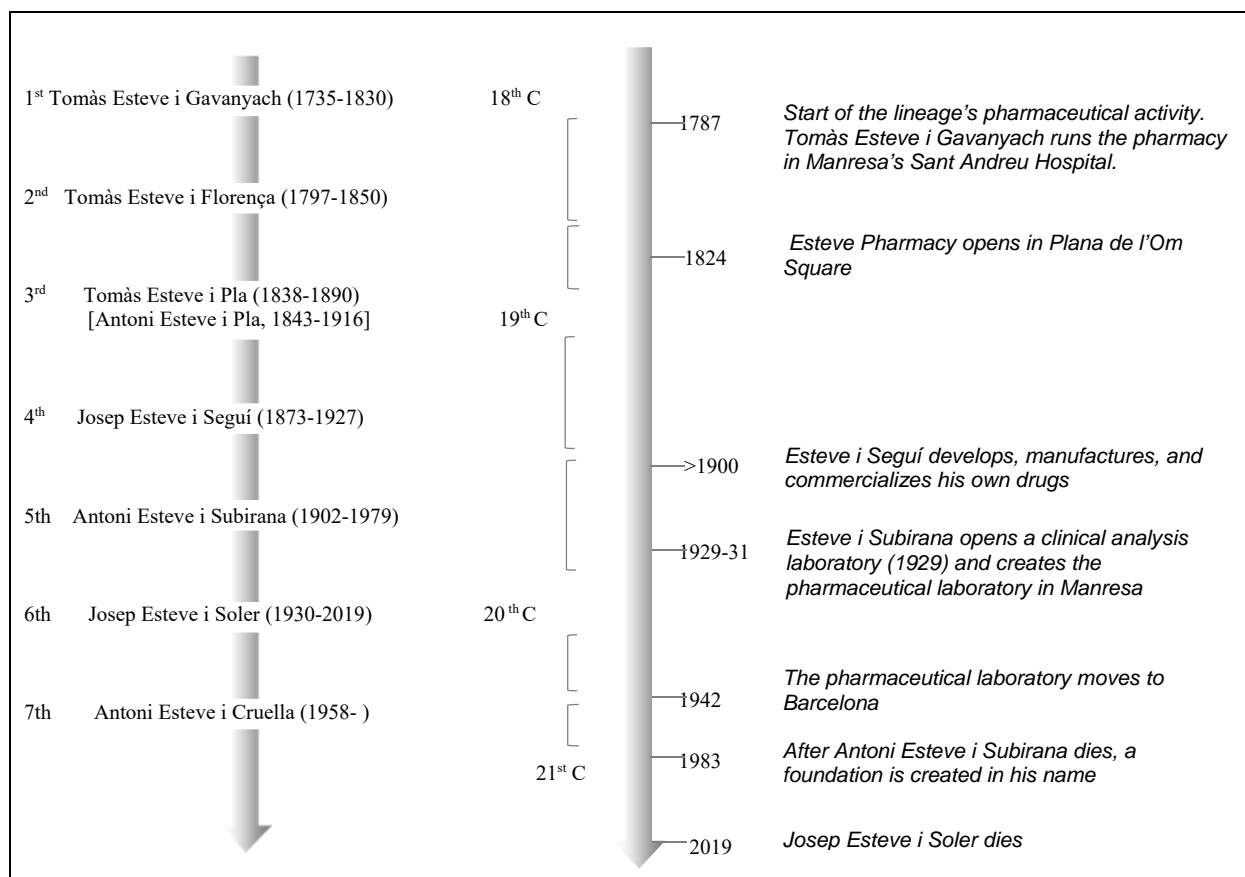


Figure 1. Seven generations of pharmacists in the Esteve family lineage and historical milestones



Figure 2. Photograph of the Esteve Pharmacy in Manresa, still open to the public (Photograph courtesy of the Esteve Family Archive)

JOSEP ESTEVE I SEGUÍ

After three generations of “Cal Tomasset” comprising three men named Tomàs, a new era in the Esteve lineage of apothecaries began with Josep Esteve i Seguí (1874-1927)³ (Figure 3), who was outstanding, as is evident in the biography written by Genís Sinca. The book characterizes Josep Esteve as “one of the most important personages in Manresa’s social and cultural milieu in the first third of the 20th century”. In fact, the Catalan encyclopedia (*Enciclopèdia Catalana*) considers him both a pharmacist and a folklorist.

Born in Manresa, he studied pharmacy in Barcelona, completing an internship in Dr. Degollada’s pharmacy on Avinyó Street in Barcelona. In 1897, he restarted his uncle Tomàs’s family pharmacy after a period of inactivity. Moreover, he transformed the family business from a local drugstore into a pharmaceutical laboratory that developed, manufactured, and commercialized its own products. Among these products, especially noteworthy are “Esteve Vichy Powder”, “Esteve Stomach Powder”, “Esteve Chest Powder”, and “Esteve Headache Powder”.

Following in his father’s footsteps, he became an important figure in Manresa’s social and cultural scenes. Manresa’s intellectuals regularly met in the backstore of the pharmacy. In 1901, he married Joaquina Subirana i Suaña, with whom he would have a son. He was very active in local cultural organizations; he founded and led the *Orfeó Manresa* choral society (1901). He also founded the *Centre Excursionista de la Comarca del Bages* county hiking association (1905) and served as its first president. Moreover, he started the *Esbart Manresà de Dansaires* dance troupe (1909) and the newspaper *Bages-Ciutat*. In Manresa, he collaborated with the Institute of Catalan Studies and wrote several articles on regional geography and folklore in various magazines published locally and in Barcelona. One noteworthy publication was *Paremiologia comarcana*, a collection of regional sayings and proverbs that he tirelessly compiled (see the annex of 1595 adages compiled by Josep Esteve i Seguí, published by Genís Sinca). With the Institute of Catalan Studies, he also published a dictionary of local terms related to professions in Bages.

On October 4, 1927, Esteve i Seguí died of a heart attack at the age of 53. In the speech he gave on his induction into the Royal Academy of Medicine, his grandson, Josep Esteve i Soler, acknowledged that Esteve i Seguí’s passion for science had aroused intellectual curiosity, fostered political commitment, and instilled a love of study in his son, Antoni.⁴



Figure 3. The last four generations of Esteve family pharmacists. From left to right: Josep Esteve i Seguí, Antoni Esteve i Subirana, Josep Esteve i Soler, and Antoni Esteve i Cruella (Photographs courtesy of the Esteve Family Archive).

ANTONI ESTEVE I SUBIRANA

Not to diminish the accomplishments of the previous members of the Esteve pharmaceutical lineage, it was in the fifth generation that Antoni Esteve i Subirana (1902-1979) brought about the most important changes. Here we briefly summarize the most notable points from his biography, which is accurately detailed in the monograph written by Jacint Corbella i Corbella for the Institute of Catalan Studies. Being Esteve i Seguí's only son, Esteve i Subirana assumed the responsibility of the pharmacy after his father's premature death, when he was just 25 years old. He carried out several studies on lichens from which he would write his doctoral thesis in 1932. One year after taking on the pharmacy, he married Paquita Soler i Casulleras (1907-1992), and they went on to have three sons and a daughter. In the traditions of his grandfather Tonet and his father Josep, in Esteve i Subirana's time the backstore of the pharmacy continued to be a hub of social, intellectual, and even political activity.

In 1929, his entrepreneurial drive and innovation led him to set up a small clinical analysis laboratory on the top of the old family pharmacy. At the same time, he was also working as an analyst at Sant Andreu Hospital in Manresa, where his great-great-grandfather had managed the pharmacy. In 1931, he founded a laboratory on Urgell Street in Manresa, on the top floor of the house where he had been born. These two laboratories were the seeds that would grow into Dr. Esteve Laboratories. While the first generations of Esteve apothecaries successfully established a pharmacy in Manresa that is still open today, Esteve i Subirana created an international pharmaceutical company that is still in business today.

The first drug that Antoni Esteve developed was Esterosol[®] (1929), an oily derivative of vitamin D first produced in Spain by the irradiation of ergosterol with a device he built himself. Later on, and also for the first time in Spain, he synthesized an arsenical (1934) and a sulfonamide (1937-38) (Table 1).

When the Spanish Civil War broke out, Esteve i Subirana had to go into exile because of his cultural and political activism as a republican and a Catalan nationalist; he spent a year and a half in France. In Paris, he headed the research division at Roussel-Uclaf laboratories. This experience would prove invaluable when he further developed his own laboratory after returning to Catalonia. Ten years after the laboratory on Urgell was founded, it caught fire, accelerating its definitive move to Barcelona. In 1942, the base of operations for Dr. Esteve Laboratories was established in Mare de Déu de Montserrat Street in the Horta-Guinardó district (Barcelona). Despite the trying times, Antoni Esteve and his wife managed to keep their family going without stopping the laboratory's research and commercial activity. In 1952, Antoni Esteve synthesized and commercialized his first original product, a hemostatic agent. He would go on to synthesize other new drugs (Table 1), including the vasoprotective agent calcium dobesilate (synthesized in 1968 and commercialized in 1971). Together with the hemostatic agents, calcium dobesilate would open doors to future business collaborations around the world and became the first exclusively Catalan drug to be renowned internationally.

Antoni Esteve held many important positions in diverse public institutions. He served as president of the Pharmacy Academy of Barcelona and of the Catalan Society of Physical, Chemical, and Mathematical Sciences, and he twice served as vice-president of the Academy of Medical Sciences of Catalonia and Balearic Islands. He was also inducted into the Institute of Catalan Studies, where he served as president of the Science Section.

After having survived severe appendicitis when he was 7 years old, a serious automobile accident when he was 21, two strokes when he was 44 and 64, Antoni Esteve i Subirana died on June 13, 1979, the day of the feast of the saint he was named for, at the age

of 77. He left behind a centuries-old family pharmacy tradition that he managed to transform into an important pharmaceutical company, Dr. Esteve Laboratories, where his eldest son, Josep Esteve i Soler, would continue to build on his legacy.

In the words of Jacint Corbella i Corbella (2006), Esteve i Subirana was one of the people who formed part of the Institute of Catalan Studies in the dark times of repression when it was crucial to be discreet. He adds that Esteve i Subirana was a “valuable scientist, fully identified with what the Institute represents, as well as the creator of a large industry and [...] and a very discreet person.” Referring to this sense of social and cultural commitment, Josep Laporte i Salas (1922-2005) said of Esteve “... and I'm sure he also would be happy to be able to see the great changes that our country has undergone during the last twelve years in the direction that, in such firm and inspiring way, he wished to take throughout all his life, as is evidenced by the many initiatives he undertook as a protector of Catalan culture; his brave attitude could be considered nearly an act of heroism”.⁵

TABLE 1. ANTONI ESTEVE I SUBIRANA'S MAIN CONTRIBUTIONS TO THE FIELD OF PHARMACEUTICAL RESEARCH	
PRODUCT (YEAR)	CHARACTERISTICS
Compounds with vitamin D: Esteresol®, Esterocal®, Cesterol® (1929)	Esteve was the first to obtain vitamin D in Spain; he accomplished this by irradiating ergosterol with a device he built himself.
Arsenicals: neoarsenobenzene (Neo-spirol ®, 1934) and "mafarsamina" (arsenoxide)	First antisyphilitic agent sold in Spain
Sulfonamides: AmidoSulfol®, Cromo-Sulfol® (1938)	First effective antibiotics of the sulfonamide group sold in Spain
Sulfathiazole: Leuco-tiazol® (1944)	A lawsuit between laboratories made it possible to manufacture and sell this antibiotic
Studies on penicillin (1944)	He undertook several studies on penicillin, being the first in Spain to produce it, but he could not market it.
Methadone; Metasedin® (Methadone hydrochloride) (1951)	After the Second World War, the requisitioning of German patents allowed this product to be synthesized and sold in Spain
Hemostatics: <ul style="list-style-type: none"> • Hemorrhagic-101® (1952) • Etamsylate/cyclonamine: Hemo-141® and Dicynone® (1952) • Antihemorrhagic-205® 	First original hemostatics produced by the company; these yielded significant international sales
Other products synthesized and commercialized through agreements with other laboratories: <ul style="list-style-type: none"> • Isonicotinic acid hydrazide (isoniazid): Aldoxal® (1952) • Phenylbutazone (Butalgine®, 1953) • Nitrofurantoin (Furobactin®, 1955; Altabactin®, 1960), • Hioscin-propansulfonium (Espacil®, 1967) • Cinnarizine (Dielamine®, 1968) • Other derivatives of phenylbutazone (Alfida® 1968) and Danilón® (1969) 	<p>An antituberculosis drug whose anticoagulant effects he studied</p> <p>Antirheumatic and anti-inflammatory</p> <p>Antibiotic</p> <p>Antispasmodic</p> <p>Antivertiginous</p> <p>Antirheumatic and anti-inflammatory</p>
Calcium dobesilate: Doxium ® (1968)	This new drug was obtained thanks to his experience in researching vascular fragility with hemostatics. Together with the hemostatics, it became the first entirely Catalan drugs to be sold internationally

JOSEP ESTEVE I SOLER

Born in Manresa on January 4, 1930, he studied pharmacy at the University of Barcelona so he could run the family pharmacy. He earned a postgraduate degree in Management and Business Administration and a PhD in Pharmacy. In 1953 he joined the pharmaceutical company his father had created, and for over two decades he made significant contributions to research, helping expand Dr. Esteve Laboratories in science, business, and international presence. On his father's death, he assumed control of the company, leading it until 2005.

As a result of his productive professional activity, he held several collaborative positions (at "Farmaindustria" and the Catalan Foundation for Research, amongst others) and received numerous institutional and civil distinctions and awards. He served as president of the Royal Academy of Pharmacy of Catalonia, full member of the Royal Academy of Medicine of Catalonia, corresponding academician of the Royal National Academy of Pharmacy in Paris, and vice-president of the Academy of Medical and Health Sciences of Catalonia and the Balearic Islands. Among other distinctions, he also received the Civil Order of Health, the highest distinction awarded by the government of Spain in the area of health, and the Creu de Sant Jordi, one of the highest civil distinctions awarded by the government of Catalonia.

Like other family members, Josep Esteve also showed a keen interest in Catalan language and culture, continuing in the line initiated by his grandfather Josep Esteve i Seguí, who was a good friend of the many talented physician Oleguer Miró i Borràs (1849-1926), a regular at the discussions in the backstore of the pharmacy. Another good friend of the family, Josep Alsina i Bofill, a physician and a teacher, stood out as an advocate of Catalan medical language.

Shortly after the death of Antoni Esteve i Subirana, Josep Esteve, along with his mother, brothers Jordi and Joan, and sister Montserrat, created the Dr. Antoni Esteve Foundation to publicly honor his father's memory. Unfortunately, on March 29, 2019, the 40th anniversary of his father's death, Josep Esteve i Soler passed away.

On Josep Esteve i Soler's induction into the Royal Academy of Medicine, Josep Laporte stated that the main feature of this new academic is his mastery in leading the industry as the head of a business that he inherited from his father, jointly with his two brothers and sister who have helped him so efficiently⁵.

DR. ANTONI ESTEVE FOUNDATION

In its four decades of existence, the Dr. Antoni Esteve Foundation has carried out many activities related to the family's centuries-old pharmaceutical tradition⁶, as is expressed in the title of this article. For 36 years, Josep Esteve i Soler was the president of the board of trustees of this foundation. After his death, his sister, Montserrat Esteve i Soler, a physician, assumed this position, and his son, Antoni Esteve i Cruella, joined the board of trustees, assuming the vice-presidency, continuing the family tradition in the 7th generation of pharmacists.

The Foundation was created three years after the death of Dr. Antoni Esteve. His wife and children wanted to publicly honor the memory of the illustrious pharmacist by creating a foundation bearing his name. The main goals of the institution are to stimulate progress in pharmacotherapeutics through scientific communication and discussion and to promote multidisciplinary cooperation through the activities and publications they organize and sponsor. Another key figure in the Foundation is the founding director, Sergi Erill, a physician and professor of pharmacology who understands the family ethos and has successfully translated it into action through the years to confer the distinctive hallmarks of the Foundation mentioned in the introduction to this article. Dr. Erill explains that, in a sense, he emulated the Gordon Wolstenholme's (1913-2004) idea for the CIBA Foundation, which the renowned British economist Lord William Henry Beveridge (1879-1963) and a member of the CIBA Foundation Board of Trustees defined as "not a laboratory for mixing compounds, but a laboratory for mixing scientists"⁷. This conception of the Dr. Antoni Esteve Foundation has continued as Fèlix Bosch, one of the authors of the current article, has carried on with Dr. Erill's work since 2009.

Continuing paraphrasing Dr. Erill, those of us who work at the Foundation today find it difficult to know whether the tasks we undertake can ever be sufficient to honor the memory of Dr. Antoni Esteve i Subirana, but we are pleased that the Foundation which bears his name continues to increase its activity and its impact. We should be grateful for the generosity of his children who made it possible for so many benefit⁸.

THE FOUNDATION'S INITIATIVES IN THE FIELD OF HISTORY

The Dr. Antoni Esteve Foundation's commitment to the history of medicine and of the health sciences goes back to 1997, with the first volume of the *Pharmacotherapy revisited* series. This series comprises nine volumes of facsimiles of articles selected by international experts for the decisive role they have played in the development of the different branches of pharmacotherapy. The collection covers pharmacokinetics and pharmacodynamics as well as other topics, such as the pharmacological basis of asthma and allergy, the central theme of the latest volume, compiled by the immunologist Juan Manuel Igea.

*Pharmacological basis of asthma and allergy: A collection of seminal articles*⁹ describes the first, mainly non-pharmacological, therapeutic procedures aimed at reinforcing or changing natural immunity, such as the use of pollen to immunize patients with hay fever. This book introduces the main pharmacological and non-pharmacological procedures used to treat allergies and describes their historical development. It also highlights the authors who have contributed to modern therapeutics in allergology to help readers appreciate the most important advances in the history of this relatively new discipline.

Another area where the Foundation has advanced the history of medical science is the study of the social impact of early developments in antimicrobial pharmacology, specifically arsphenamine, sulfonamides, and streptomycin, through its support of Elisabet Serés's doctoral thesis¹⁰. This project included a quantitative and qualitative analysis of articles on these three drugs published in *The New York Times*, *The Times*, and *La Vanguardia*. The author concludes that the information on the first antimicrobials was widely disseminated in the daily press and the quality of the published news was acceptable. The discovery and therapeutic use of these three drugs were key pharmacological breakthroughs in the 20th century that had a significant impact on society.

When reviewing the history of science and medicine, one cannot help but notice that women are few and far between. Naturally, Marie Curie is recognized, but many other women scientists remain anonymous. Women had to overcome all kinds of difficulties to carry out their research, and their work has become obscured or even hidden. For this reason, in 2017, with the aim of righting this historical wrong and shining light on some of the women who have played decisive roles in science, under the coordination of Dr. Sergi Erill, the Dr. Antoni Esteve Foundation published *La ciència oculta* (Hidden Science)¹¹, a book to inform both scientists and the general public about the lives and work of 15 outstanding women.

Through two images that *a priori* have nothing in common, each chapter of *La ciència oculta* takes us into the scientific careers of women like Hypatia, a key figure in the scientific community of ancient Alexandria, and, more recently, Jocelyn Bell, whose role in the discovery of the pulsar was never recognized with the Nobel Prize, which was awarded to her colleagues Antony Hewish and Martin Ryle. Fred Boyle, founder of the Institute of Astronomy at Cambridge and considered one of the most important scientists of the 20th century, said that this oversight was an inequity.

Earlier, the Dr. Antoni Esteve Foundation had published *Dotze dones en la biomedicina del segle XX* (Twelve Women in 20th century biomedicine)¹², coordinated by Roser González-Duarte, professor of genetics at the University of Barcelona. This publication contains short biographies explaining the contributions of 12 top-level researchers to science. The work not only describes the research for which they have been recognized in the history of medicine—seven of them were awarded a Nobel Prize—but also informs readers of the obstacles these women had to overcome to be recognized in their careers. For instance, Rita Levi-Montalcini, who was awarded the Nobel Prize in Medicine for discovering nerve growth factor, dedicated her entire life to science despite all that entailed for a woman and a Jew during Mussolini's dictatorship. Unlike Levi-Montalcini, Rosalind Franklin, a scientist who played a key role in

one of the most consequential breakthroughs in the 20th century—the discovery of the structure of DNA—was never awarded the Nobel Prize, which went to Watson, Crick, and Wilkins in 1962.

The Dr. Antoni Esteve Foundation has also focused on Catalan contributions to medical science, publishing a trilogy on Catalan medical eponyms (*Eponímia mèdica catalana*)¹³, which was compiled by the experts Elena Guardiola (Pompeu Fabra University, Bayer, and corresponding scholar of the Royal Academy of Medicine of Catalonia) and Josep-Eladi Baños (Pompeu Fabra University and University of Vic-Central University of Catalonia) in articles published periodically in the journal *Annals de Medicina*. Fruit of intense research, the first volume, published in 2003, included 21 Catalan personages, some of whom gave rise to more than one eponym. The second book¹⁴, which was presented in 2011 at the Academy of Medical and Health Sciences of Catalonia and Balearic Islands, not only compiles 29 medical eponyms of Catalan origin, but also provides exhaustive information on what the eponyms describe (surgical techniques, anatomical structures, diseases, etc.) as well as biographical information. The third volume¹⁵, presented in 2016, also included many eponyms that refer to hospitals (e.g., Hospital Clínic, Hospital del Mar, or Hospital Parc Taulí) or to geographical locations like Barcelona, Sabadell, or Catalonia. All together, the three volumes contain more than 60 articles on personages and research centers that have left their indelible mark in the history of medicine. To facilitate international appreciation for Catalan contributions, the Dr. Antoni Esteve Foundation has also published a book in English: *Catalan physicians' contributions to medicine: a historical view through eponyms*.¹⁶

The Dr. Antoni Esteve Foundation's commitment to Catalan medical terminology is also historic in its own right. This terminology, which goes back to the Middle Ages, culminated in the publication of the first edition of the *Diccionari Enciclopèdic de Medicina* (Encyclopedic Dictionary of Medicine) in 1990. The second edition was published in 2000. In 2014, the Dr. Antoni Esteve Foundation joined the DEMCAT project (Encyclopedic Dictionary of Medicine in Catalan)¹⁷, with the aim of adapting the earlier versions of the Encyclopedic Dictionary of Medicine and dictionaries published by TERMCAT to the 21st century. This project is promoted by the Institute of Catalan Studies, the Academy of Medical and Health Sciences of Catalonia and the Balearic Islands, the publisher Enciclopedia Catalana, and the terminology authority TERMCAT in collaboration with the Dr. Antoni Esteve Foundation and the Department of Health of the Government of Catalonia.

The Dr. Antoni Esteve Foundation has also focused on Minorca's place in the history of medical science, publishing a monograph in 2006 exploring the figure of Mateu Orfila (1787- 1853). *Entre la ciencia y el crimen: Mateu Orfila y la toxicología en el siglo XXI*¹⁸ (*Between science and crime: Mateu Orfila and 21st-century toxicology*) examines historical events that characterized chemistry and toxicology in the 19th century. Other aspects covered in this publication are the role of forensic medicine in criminal investigations, animal experimentation techniques, and controversies in chemistry and toxicology in that historical period.

The Foundation also collaborated in the publication of *l'Enciclopèdia de Menorca's* first volume on the history of the medicine¹⁹, which covers the period from the Late Middle Ages to the first third of the 19th century. British rule in Minorca in the 18th century made the island very well known throughout Europe, also with respect to medicine and healthcare, thanks to important contributions, such as those the Scottish surgeon George Cleghorn. This 301-page volume is divided into twelve chapters covering topics such as the education and training of healthcare professionals, health regulations, the practice of medicine, hospitals, the pioneering introduction of Jenner's vaccine in Minorca, health boards and the prevention of epidemics, quarantine centers, and texts on medicine written in Minorca in the 18th century and early 19th century.

The Dr. Antoni Esteve Foundation has also participated in numerous activities at the Lazaretto of Maó, the headquarters of School of Public Health. Within this area, the

Foundation also contributed to the publication of *Historia de la Sociedad Española de Epidemiología (1978-2014)*²⁰ (History of the Spanish Society of Epistemology (1978-2014)). Directed by Professor Josep Bernabeu-Mestre, this monograph explains the origins and evolution of an institution that arose during the Spanish transition and has become a point of reference in the Spanish health system.

Finally, to strengthen the role of the humanities in the teaching of medicine, through history, art, literature, or even music, the Foundation organized a meeting in Siena with the collaboration of the University of Siena and Pompeu Fabra University. This meeting resulted in the publication of a monograph in English on the topics discussed during the seminar²¹.

CONCLUSIONS

The four-century-long pharmaceutical tradition of the Esteve lineage remains intact and robust to this day, as is evidenced in pharmacy that is still open in Manresa, in the international projection of the pharmaceutical laboratory, and in the Dr. Antoni Esteve Foundation, an exemplary scientific foundation. In the course of nearly four decades, this Foundation has pioneered various initiatives related to the history of biomedicine, combining these with other activities, publications, and projects in the field of pharmacotherapeutics.

This is how Antoni Esteve i Cruella is leading the seventh generation of the Esteve lineage of pharmacists. The current manager of the pharmacy in Manresa, he has held different positions in Dr. Esteve Laboratories and assumed the vice-presidency of the Board of Trustees of the Dr Antoni Esteve Foundation after his father's death. Esteve i Cruella and the other current members of the Foundation are firmly committed to continuing the Foundation's contributions to the advancement of the history of biomedicine.

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NOTES

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- ¹ This surname is spelled differently in different documents: Gavanyach, Gabanyach, Gavañach, Gavanyac, and Gavenyach have all been used.
- ² In some texts, the name Florença is spelled Florensa
- ³ As mentioned in Jacint Corbella i Corbella (2006), the documents regarding the year Josep Esteve i Seguí was born differ, some cite 1873 but others cite 1874.
- ⁴ Citation extracted from ESTEVE i SOLER, Josep. *Investigació farmacèutica i progress de la medicina*. Acceptance speech by the elected scholar, Josep Esteve i Soler at his induction on December 1, 1991. Barcelona: Royal Academy of Medicine of Barcelona, 1991, pp 9-47.
- ⁵ Citation extracted from LAPORTE i SALAS, Josep. *Investigació farmacèutica i progress de la medicina*. Speech in response to the elected academic Josep Esteve i Soler's acceptance speech on December 1, 1991. Barcelona: Royal Academy of Medicine of Barcelona, 1991, pp 49-60.
- ⁶ Dr Antoni Esteve Foundation [online]; Barcelona, 2019. <<http://esteve.org>>[Accessed: November 4, 2019]
- ⁷ Citation extracted from WRIGHT, Pearce. "Sir Gordon Wolstenholme" [Obituary]. *Lancet* 2004; 364(9431):324.
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