HERNANDO DE TORRES KEY FIGURE IN THE FOUNDATION OF THE FIRST OFFICIAL PHARMACY OF AMERICA: APPROACH TO HIS WORK IN PUERTO RICO THROUGH A 1512 INVENTORY.

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...every new settlement established in the Spanish colonies in America had to be provided as soon as possible with a hospital, a physician and an apothecary in order that the old and the sick, whether they were Spanish or indios could be duly taken care of.

The Dominican Republic: scenario of the first Hospital of America and most probably had an “unofficial” pharmacy.

Puerto Rico was key to the Spanish Empire since the early years of conquest and colonization of the New World.
ILUSTRATIONS OF XVI CENTURY PUERTO RICO
Puerto Rico in the context of New World (XVIc)
One of the authors of this paper, who is an American with Spanish ancestors, identified in 2001 a transcribed document in Puerto Rico an inventory of implements which included drugs. It has contributed to a better understanding of the state of the art of pharmacy in the first third of the XVI century, as well as some of the qualifications of the young and adventurous Hernando de Torres, who remains an anonymous figure in the American and European pharmacy historiography.

This is how activities related to drug dispensing through an official “botica” (pharmacy) started in Puerto Rico just 20 years after the arrival of Christopher Columbus to the New World.
By the time Hernando came to Puerto Rico, Christopher Columbus had made four voyages of exploration to the New World, so is not surprising that much information concerning the life and resources overseas was available.

Between 1492 and 1503, Columbus completed four round-trip voyages between Spain and the Americas, all of them under the sponsorship of the Crown of Castile.
Apothecaries that travel to America: reasons

To practice their trade like: Hernando de Torres

Commercial. More apothecaries were attracted for these reasons
Objectives

• Examine the qualifications of Hernando de Torres from Seville as the pioneer of institutional pharmacy in XVI Century America.

• Analyze the diverse drug inventories brought to Puerto Rico, with emphasis in the one brought by Hernando de Torres.
Material and Methods

Drug inventories 1512, 1766, 1768, 1779, 1788, 1807.

Review of literature on XVI century therapeutics and pharmacy history in Spain and the Americas, with emphasis in Puerto Rico.
Proposed Profile for

Hernando de Torres
A 25 year old Sevillean, able to read and write Latin.
Knowledgeable of the medicinal properties of several hundred plants, many animals, and a number of minerals.
Exposed to the works of contemporary pharmacists, the European cannon of herbals and medical texts, an later, publications on chemistry and botany.
Follower of the Hippocratic tradition. His understanding of disease and its causes would have been explained according to the humoral theory and would have dispensed medicines aimed at purging excessive humors.
Trained through a four year apprenticeship with a professional *boticario*, serving customers, ordering medicines, preparing and filling prescriptions and learning how to manage the account books.
Results

– The inventory directly handled by Hernando de Torres in Puerto Rico contained more than 90 articles that included:

• Different types of substances in diverse dosage forms.
• Pharmacy Implements.
• Books.
• Materials to built furnishings for the botica.
DIFFERENT TYPES OF SUBSTANCES IN DIVERSE DOSAGE FORMS.
Fábregas Troche, Sandra M. La Institucionalización de la Farmacia en Puerto Rico. UPR.2003, p. 64.
The inventory handled by Hernando de Torres

- Fábregas Troche, Sandra M. *La Institucionalización de la Farmacia en Puerto Rico*. UPR.2003, p. 64.
Syrups: of roots, distilled products.
-Ointments: lead, white, Egipciaco Ointment, made from copper acetate, vinegar and honey, tonics.
-Pills.
-Laxatives: Rhubarb.
-Waters: fennel, sage bush, wild chicory.
-Oils:
-Powders: Sandalwood.
-Electuaries: diafinicon, etc.
-Juices: rose.

Examen apothecariorum by Pedro Benedicto Mateo. 1521.
With this list of substances were ingredients used to elaborate medicines such as: enedita-electuary (preparation of several powders of laxatives and stomatic herbs and roots mixed with foamed honey) as well as other compounds such as: Theriaca.

Canafistula (plant cited in the inventory of Hernando de Torres).
Pharmacy Implements
The implements brought by Hernando to prepare and store drugs were: *redomas* (flasks), *botecillos de vidrio* (small glass containers), *cajas de boticario* (apothecary boxes), *mortero de piedras* (stone mortar), *un peso de pesar de oro con sus piedras* (a scale to weight gold with its gems), *papel*, *un embudo de hoja de lata*, *espátulas* (paper, a syringe, a tin funnel, spatules) and *botijas* (jars).

For diverse uses. Made of porcelain, glass, copper or marble. Used to prepare prescriptions for powders, wafers, creams, ointments and pomades. Copper mortars were used for hard substances.
Caja de madera con la inscripción “Raíz de Grama” y la representación de un Unicornio, cuyas rasuras fueron un medicamento de los siglos XV, XVI y XVII
Books
Books used in XVI Century Pharmacies

The Canons of Mesué,  
the Canon of Avicena,  
Dispensarium ad Aromatorios, Nicolaus Praepositus, 
Luminare majus of Manlius de Bosco,  
Medical Matter of Dioscórides  
Liber Pandectarum Medicinae, Mateo Silvático.

Probably a reference for Hernando was the *Concordie Apothecarium Barchinonensium (1511)*, considered the second pharmacopeia of the world.
Materials to built furnishings for the *botica*

20 wooden boards for the pharmacy and 20 barrets sticks.

*oregano en 6 ts.;* 20 *tablas para la botica en 1 po.;* 4 *ts.;* 20 *barretas de palo en 4 ts.;* 3 *librillos pequeños en 6 ts.;* 5 *botijas de a media arroba de agua*
We assume that the *botica* founded in Puerto Rico was similar to the ones established in the south of Spain in the XVI century, specifically in Granada. It would have been composed of the structure of the pharmacy itself, a wooden ladder, a draw and a chest. The implements used to prepare and store the medicines would have been rudimentary, consisting of a copper ladle, a scale, boxes of different shapes and sizes, for varying uses, jars of various sizes and colors, some purgative sieves, a palette knife, a brass spoon, measures for syrups and oils, a small metal mortar with an iron pestle, and syrup and water flasks.

Note: Some artifacts of the original *botica* in Caparra, Puerto Rico (1512).
Furthermore, it is known that the American therapeutics were received slowly in Europe,

In summary, Renaissance medicines were made up of medicines coming from the greco-roman tradition, predominantly the chemical vegetables, remedies. Defended by Paracelso, the plants coming from America and popular pharmacy itself.

Guayaco’s description in the book of Nicholas Monardes
It was not a simple chance that the first apothecary who arrived to the coasts of the Puerto Rico was from Seville, acknowledged in the XVI century as having a leading commercial role with the New World, which included drugs.

This opened new avenues of information and knowledge about the foundations of pharmacy in the Island that related so directly with Seville.

Until 2001, no pharmacy literature in Puerto Rico addressed the fact that medicines from external sources were brought to the Island so early in the colonial period.

Is evident in Inventories of other official pharmacies in Puerto Rico like the *Botica Real* founded in 1767 the presence of American Drugs such as: guayaco or *palo santo*.
Pontoon bridge over the Guadalquivir River. Seville.
Conclusions

The arrival of Hernando de Torres to Puerto Rico sets a new era for pharmacy in America as an institution separated completely from medical activities. This is evidenced through his credentials and the 1512 inventory brought from Seville to Caparra, Puerto Rico.
References


Thanks for your attention

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