

# THE MARTÍ PUMAROLA'S NOTEBOOK: A CLINICAL AND PHARMACOLOGICAL APPROACH TO 19TH CENTURY VETERINARY ACTIVITY

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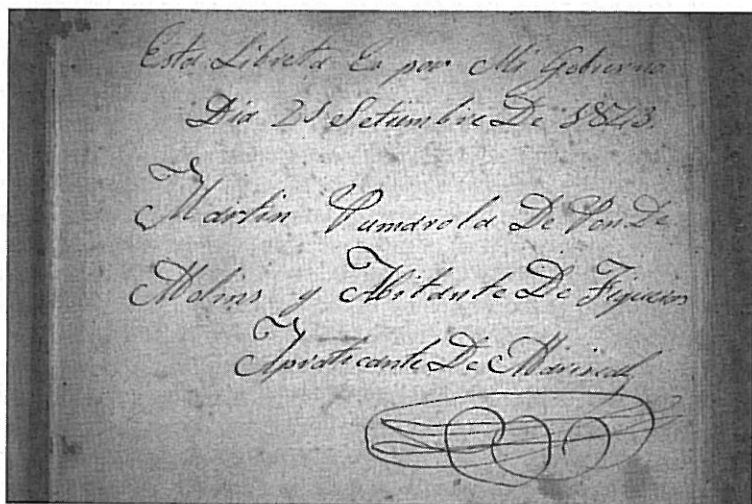
*This work has been compiled by Doctor Margarida Arboix from the Pharmacology and Psychiatry Department of the Autonomous University of Barcelona, who made the pharmacological study of the notebook. Another author is Mr Joan Pumarola, my father, a veterinary clinician now retired in Figueres (Alt Empordà). He has read the original manuscript and has rewritten it in an understandable Catalan. he has also collaborated in the transcription of the text and has discussed with us the therapeutic aspects. The third author is myself, Dr Martí Pumarola from the Department of Pathology and Animal Production of the Autonomous University of Barcelona. I have made the clinical study of the notebook, trying to reconstruct the veterinary activities in the beginning of the last century. A few years ago, I was arranging the family library and I found this notebook. It was written by Martí Pumarola, my great-great-grandfather, in 1834. The history of his notebook is a little bit the history of my family. I come from a veterinary family which has written records from the 17th Century. From that period until now we have a continuous line of veterinarians who have worked in the same geographic area. the Empordà, at the north of Catalonia (Spain).*

I will start my explanation by introducing you to my family and our family tree (Fig 3). I have only put in it all of those members who have been veterinarians or have worked with animals. Our history starts with Sebastià Pumarola, a blacksmith who worked at the beginning of the last century. One of his sons was Martí Pumarola, the author of the notebook. He was an *albéitar*, a name given in Spain to veterinarians before the creation of the Veterinary Schools. He worked in the second half of the 18th century. Three of his sons, Joan, Sebastià and Agustí were veterinarians; one of them was a military veterinarian. Agustí Pumarola, my great-grandfather, had two veterinary sons, Marius and Martí, my grandfather. His son Joan Pumarola is my father and the co-author of this article. And we do not want to forget my sister Carmen, the first veterinary woman of our saga.

Martí Pumarola lived from 1825 until 1896. The only information we have about his life comes from the will of his father, his marriage settlement and his own will. But we have his professional notebook. It is a hand-written book signed



**Fig.1 Martí Pumarola with his wife and his four sons. Joan, Pere, Sebastià and Agustí, about 1885.**



**Fig.2 Translation of the text: This note-book is by my guidance 21st of September of 1843**

**Martí Pumarola of Pont de Molins and inhabitant of Figueras  
Veterinary Assistant  
Signature**

on 21 September 1843. On page number one (Fig 2) we can appreciate the signature of the author and a specification of his origins from Pont de Molins and living in Figueres (Alt Empordà). It includes three different parts: the first one is dedicated to Animal Anatomy; the second part includes notes of Forensic Veterinary. The third part is a collection of 113 prescriptions and cures for human and animal diseases. We suppose that he wrote it during his studies to become an albeitar, because in 1843 Martí Pumarola was only eighteen years old.

We have only studied this last part of the notebook. The first problem we found was the difficulty to read and understand it because of its particular style. At that point, it was my father who read and transcribed the document, rewriting it in modern Catalan.

In the notebook, Martí Pumarola had gathered together a lot of prescriptions and cures that he had used in his habitual work; although most of them were for human care they could also be applied to animals. Initially, we thought that it could be an original document but in one of the pages the author mentioned the existence of a supposed physician working in his area who was perhaps the creator of part of the prescriptions.

As mentioned above, the notebook included 113 prescriptions and cures. They were distributed as follows: 102 prescriptions for human and animal care and 11 specific prescriptions for animals. If we make a clinical interpretation in the first group of prescriptions we notice the following distribution of prescriptions:

- Skin	27 prescriptions
- Nervous system	11
- Digestive system	16
- Heart and vessels	8
- Reproductive system	7
- Tumours	4
- Rheumatism	4
- Respiratory system	3
- Fever	3
- Pain	3
- Urinary system	2
- Eyes	2
- Ear	2
- Various	10

The skin, with 27 prescriptions, is the most frequently treated part of the animals. We have found 14 prescriptions about skin wounds (laceration, ulceration, etc.), 6 for skin cleaning and hygiene and 4 antimycotic treatments.

The nervous system care includes traumatic pain treatment with 3 prescriptions, migraine with 2 prescriptions, frights care (shock) with 2 prescriptions, and neuritis like sciatica with 2 prescriptions. The digestive system is represented by 4 prescriptions against diarrhoea, 4 prescriptions for oral wounds, and other prescriptions against intestinal parasites, antiemetics, against anorexia etc.

The group of heart and vessels includes 4 antihæmorrhagic prescriptions, one against dropsy, and one for heart health. The reproductive system is represented by 6 prescriptions related to parturition problems and one against vererian disease in males.

The rest of the groups are mainly made up by prescriptions against pain or to take care of wounds in each system. In the 'various' group of ten prescriptions we found cleaning or disinfectant solutions, a fungal toxin neutralizer, and a group of prescriptions to lengthen the life.

As you can appreciate a lot of different problems were treated. In the second group of eleven specific veterinary prescription we find:

- Skin	4 prescriptions
- Infectious diseases	3
- Digestive system	1
- Nervous system	1
- Eye	1
- Health care	1

If we examine the animal species he treated, we find that five prescriptions were specific for horses, three for bovines, one for dogs and two for any kind of animal. We have also identified in the manuscript some known diseases like equine asthma, carbuncle, an intermittent ophthalmia, ungulates foot diseases, Glanders, Rabies, the mite infestation of skin, equine colic, etc.

When we analyse the pharmacological aspect of the manuscript we notice that most of its prescriptions are originals. The majority correspond to well-known cures, or have a therapeutic basis. Do not forget that the author was an albeitar, not a veterinarian, and that in 1843 when the notebook was written, the only Veterinary Faculty existing in Spain was in Madrid, and had been founded in 1792. In that school the subject Terapéutica y operaciones químicas para uso del Veterinario, (Therapeutic and chemical operations for veterinary use) was introduced in 1806 and dealt with Therapeutics.

We suppose that the pharmacological knowledge of my great-great-grandfather was based in the oral tradition and in the natural therapeutic and classic texts, such as Arte de curar (The art of healing).

Studying the notebook, we have had some problems in identifying names of plants or mineral products because sometimes they did not correspond to current known names. Usually he made use of Latin names, but sometimes the author used popular names, in Catalan or Spanish languages, which have nowadays been lost. The ingredients he made use of were different parts of plants (leaves, cortex, roots or fruits) such as *Sinapsis alba* or *nigra*, *Apium petroselinum*, *Veratrum album*, *Ehllleborus niger*, *Lirium florentinum*, Marshmallow, etc. or their products like opium, laudanum, turpentine, gum arabic, mustard, camphor, soap, alcohol, etc.

He also used products of animal origin like pig's grease, honey, white of an egg or cantharides. Minerals like arsenicum, mercury, silver, potassium, zinc

and lead were the most often mentioned, as well as salts like nitrates, carbonates and sulphates, or acids like nitric, sulphuric or tartaric acids.

The pharmacologic groups of prescriptions correspond to:

Digestive system: Laxatives, Purgatives, Emetics and Antiemetics, Anthelmintics, bloat treatment

Nervous system: Sedatives, Spasmolitics

General condition: Antipiretics, Diuretics

Eye-drops

Skin: Pomades and ointments, antiparasitic liquids, etc.

The mixtures are made using different weight measures, such as: grains, drops, scruples, drachms or drams, ounces and pounds.

We present now some prescriptions as examples:

- \* Prescription to heal chapped hoofs and to make them grow: Take half pound of suet of a castrate pig, and three ounces of turpentine's oil, greek glue, black glue, and new beeswax. Make it fuse together on a low flame, without boiling. Once fused and cold you can apply it on the hoofs two or three times per day.

In this prescription the irritative effect of the turpentine plus the reparative effect of the greek glue could repair effectively the chapped hoofs.

- \* Ingredients of a sedative solution: Fennel water, syrup of white opium plant and ether sulphuric (Diethyl ether).

We think the animals would be well sedated with this mixture.

- \* Prescription to prepare purgative pills: Magnesium sulphate, Potassium tartrate, grey manna, and senna.

We think that the laxative effects of senna and the salts would make these pills effective.

- \* 'Cure to treat dog's mange'. Take one ounce of turpentine, a yolk, one drachm of Solinam powder (the current Mercurous Chloride sublimate), two scruples of Cardona's salt. Once you have mixed it you add common olive oil and vinegar until you have an ointment, without putting it on the stove.

In this prescription we think that the therapeutic effect comes from the pimarinic and succinic acids, components of turpentine, and from the mercurous chloride.

- \* Here we have a strange 'Cure for a stomach ache': Prepare a soup with bread, cumin and cat's excrement. If it does not work you can add Indian hemp.

We suppose that the sedative effect of the Indian hemp will tranquilize the animal. We do not understand what would be the effect of cat's excrement.

In conclusion, we can describe the veterinary activities in Catalonia at the beginning of the 18th century. The veterinarians were devoted to the case of Ungulates, mainly horses. They treated parasitic and some infectious diseases.

They treated all the systems but mainly the skin and digestive system. But, surprisingly, they also treated eyes and ears. Furthermore, they had a great knowledge of sedatives, antipiretics and diuretics. I hope that with this short overview we can get an idea of the contents of my great-great-grandfather's notebook. We realize that further investigations have to be made in order to determine more accurately all the prescriptions and get a clear idea of the veterinary world of that period.

**FIG.3 Family tree:**

