

Research Article - History of anatomy and embryology

## Dimitrios Mavrokordatos (1811-1839), the eve of the Hellenic School of Anatomy in modern era Greece

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### Abstract

Dimitrios Alexandrou Mavrokordatos was the first regular professor of Anatomy and Physiology of the Hellenic "Othonian" University of Athens. He had completed his studies in Germany and thus he had been chosen to stimulate the empirical physicians of Greece to awaken. He died young, but his passion was so great that he had published a masterpiece in the new Greece, "On the anatomy of the human body", and left his fortune for his pupils, even though they had rebelled against him sometime before his death. With his teaching and book he established a kind of Greek "nomina anatomica" which formed the basis for medicine in the newly born country.

### Key words

Dimitrios Mavrokordatos, Anatomy, Physiology, "Othonian" University, bequest

### Introduction

After a long period of enslavement under the Ottoman Empire, the once scholarly Hellenic civilization of the Byzantine mainland was suppressed almost into extinction. Eminent Greeks scientists, who during that period lived abroad, were greatly sympathetic with the majority of their European colleagues and continued the Hellenic tradition towards scientific perfection. The evolution of anatomy in modern era Greece commenced with the foundation of the first university in the young Hellenic state. The idea was seeded, planned and realized by the Greek Prime Minister Ioannis Kapodistrias (1776-1831) at the beginning of King Otto Friedrich Ludwig von Wittelsbach (1815-1867) reign in Greece. During the 31st December of 1836, 1300 years after the closing of the Athenian Scientific School (Greek: Πανδιδακτήριο) at the time of Justinian, royal decrees defined the establishment and regulations of the new Hellenic University in Athens (Kouzis, 1939, Paraskeuas, 2007). Mavrokordatos had been appointed, during 1837, as the first Head Professor of Anatomy and Physiology. In fact, despite the controversy and his disputes with government's officials, he was appointed twice for the same position (Gazette of the Greek State, 1837).

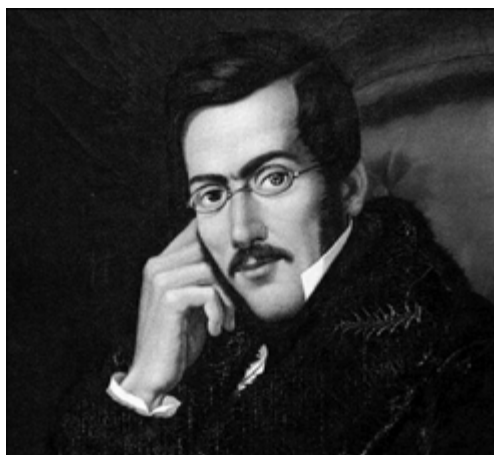
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## Life and work

It is unclear whether Dimitrios Al Mavrokordatos (Fig. 1), was born in Constantinople during year 1811 or the 27th of October 1802; this last date is mentioned in his personal notes about his family (Dontas, 1943). He was a member of a noble family with many children (Goudas, 1874), a son of Alexandros Mavrokordatos and a brother of George Mavrokodatos (1802-1858) who became a professor of the Law School of Athens. Dimitrios Alexandrou Mavrokordatos moved to Berlin to study medicine, but left without defending his dissertation, probably because of a clash with doctor Herzberg, an assistant and scientific collaborator of professor Karl Ferdinand Von Graefe (1787-1840). He returned in Constantinople and in 1831 he was appointed surgeon in the Hellenic Hospital of Galata, where he had performed a series of significant surgical operations. The next year, in 1832, he published his treatise "Some observations on the condition of medicine in Turkey and in particular in the capital of the Ottoman Empire", which had some success and was reprinted (Pentogalos, 1991). The same year, as a more than promising pupil of professor of anatomy Friedrich Tiedemann (1781-1861) in Heidelberg (Piagkou et al., 2012), he had support for his thesis, entitled "Einige Bernerkugen über die Dynamische Wirkung der Aqua Binelli", dealing with "The Aqua Binelli" (Fig. 2) that was a pharmaceutical formulation to stop traumatic bleeding (Mavrocordatos, 1832; Paraskeuas, 2007). In that period for the first time appeared the signs of his future chronic illness (Pentogalos, 1991).

In a fruitful effort to organize the new Greek state, a King's declaration was issued in May 1834 introducing the "Iatrosynedrio" (Greek: Ιατροσυνέδριο), a royal medical congress which represented an advisory body on matters of public health and medicine. Under the Ministry of Interior the congress had the task of examining and certifying physicians, surgeons, dentists, veterinarians, pharmacists and midwives and express a reference opinion on forensic matters and other medical issues (Gazette of the Greek State, 1834). On the 28th of October of the same year, Mavrokordatos signed as a member of the "Iatrosynedrio" the royal annexes concerning the guidelines for vaccination against vaccinia (Gazette of the Greek State, 1835a). He had been, during 1835, one of the 17 founding members of the Medical Society of Athens (Rigatos, 1985; Paraskeuas, 2007).

Due to the difficulties of the era, facing a newborn country, a higher level scientific school, like a medical faculty, was very difficult to be found. A royal decree for the foundation of a practical school of surgery, pharmacology and obstetrics, was published in May 1835, declaring free teaching for both the empirical, as well as the scientific and future practicing personnel of health sciences. Mavrokordatos was appointed teacher of Anatomy and Physiology (Gazette of the Greek State, 1835b). Following the recommendation of the report that Mavrokordatos sent to the king, the school was reformed in "Practical School of Medicine and Surgery" and he was appointed as its director (Kouzis, 1939). On the 24th of November 1835 he stated that "this school was the fundamental educational institution for everyone who had the desire to study in his native language, in his native country" (Editorial-Athena, 1835). Later on, to correct the huge ignorance of empirical physicians, surgeons, pharmacists and midwives, the "Iatrosynedrio" decided to gather and educate them. On the 21st March of 1836, Mavrocordatos expressed the opinion that "all students should answer any question in their field, as if they were educated in the best academies"



**Figure 1** – Portrait of Dimitrios Mavrokordatos. Professors' collection, National and Kapodistrian University of Athens.

# ANATOMIA

ΤΟΥ  
ΑΝΘΡΩΠΙΝΟΥ ΣΩΜΑΤΟΣ.  
ΠΑΡΑ  
ΔΗΜ. ΑΛΕΞ. ΜΑΥΡΟΚΟΡΔΑΤΟΥ.

— Εργον διον γρηγορον και ακριβεστον, οτι ποτεν δε τοις φε-  
— κταις τοις φεταις λελοισι — — διαφωτις λεπομεν, ελε και δεκ-  
— ο τις φησιναι ελετορον αλετορον αλετορον φησιναι — — \*

ΕΝ ΛΟΗΝΑΙΣ,  
ΕΚ ΤΗΣ ΤΥΠΟΓΡΑΦΙΑΣ Κ. ΡΑΑΛΗ.  
1836.

# EINIGE BEMERKUNGEN über die DYNAMISCHE WIRKUNG der AQUA BINELLI.

—  
Eine  
Akademische Abhandlung  
der medizinischen Fakultät zu Würzburg  
vorgelegt  
von  
D<sup>n</sup> DEMETRIUS ALEXANDER PR. V.  
MAUROKORDATO.

—  
Würzburg.  
Gedruckt bei C. Wihl. Becker, Universitäts-Buchdrucker.  
1832.

**Figure 2** – Alexandros Mavrokordatos' treatise on "Anatomy of the Human Body" (left side), and his dissertation on "Aqua Binelli" (right side).

(Editorial-Athens, 1836). During October 1836 he announced his resignation as professor of Anatomy and Physiology. The local press couldn't understand why the Greek Minister of Internal Affairs didn't try to persuade him to stay, as his knowledge was essential for "Iatrosynedrio" and also for teaching the students of the school (Elpis, 1836). Between 1835 and 1836, he had taught two courses of Anatomy and Pharmacology to a total of 70 empirical physicians and 48 pharmacists (State Decree, 1836; Kouzis, 1939).

On December 31, 1836 the Hellenic "Othonian" University had been established, named after the King's name "Otto", and its status of operation was determined by a royal decree. Three degrees were announced for professors: regular, honorary and temporary (Gazette of the Greek State, 1836). Mavrokordatos' German education was the main reason for him to be called in Athens by the order of King Otto to be appointed as a regular professor of the first Hellenic University of the new era in Athens. By royal decree he was nominated as a regular professor of Anatomy and Physiology in the newly founded university (Gazette of the Greek State, 1837a). His lectures as the first professor in Anatomy, three times weekly, were attended by only four students of the university (Mavrokordatos, 1836b), who later on became more than 20 (Lappas, 2004). The district of "Plaka" in the centre of Athens, in the street named "Tholou", hosted the first laboratory of Anatomy, equipped with skeletons, formalin preserved human organs, anatomical paintings and a microscope after the donations of a Greek benefactor named Sinas and of the King (Mavrokordatos, 1836 b). In April 1837, again by a royal decree, he was again nominated temporary professor of Anatomy and Physiology. This second declaration to nominate Mavrokordatos for the same position with a lower academic status implies some disagreements with the King's regime (Gazette of the Greek State, 1837b).

Between 1836 and 1837, Mavrokordatos published his masterpiece "On the Anatomy of the Human Body" (Fig. 2) in which, besides thoroughly anatomical description of the human parts, he established the terminology after the Hellenic terms that had been used in Ancient Greece. Because of the pressure and the urgent need of further education of new physicians in Greece, as well as the lack of economical resources, illustrations were absent (Mavrokordatos, 1836). Among his other treatises there are "Haemoptysis due to Intrusion of Leech in the Nasal Fossae", "Plague in Constantinople" and "On Cholera" (Mavrokordatos, 1836-1837). During the academic year 1839-1840 he re-designed the teaching of Physiology, accompanied with a new book written by him. Unfortunately due to his medical condition, most probably tuberculosis, he was forced to abandon his big project and asked to teach from his house, an old Turkish building in Adrianos street. He died the 5th of November 1839, leaving his treatise on Physiology unfinished (Kouzis, 1939).

Before his death, minor disagreement had occurred among the students of the Medical School and Mavrokordatos. Students' ataxia was inspired mainly by Anastasios Goudas (1816-1882) and Ioannis Kompotis against the professor of Anatomy and Physiology Dimitrios Mavrokordatos. The students declared that it was necessary for the professor to dictate his lectures more slowly, so that they could take notes, and furthermore that it was necessary to publish them, so that they could study medicine in depth. Mavrokordatos answered that neither suggestions would have been realised for their favour, as he could neither financially support his six tome treatise on Physiology to be published nor had the desire for his tempo to be changed, resulting

a students' decision for a three day abstention from their classes. Afterwards a signed petition was filled to the deanery by the disappointed students, with complaints about the way Mavrokordatos taught. Mavrokordatos himself appealed to the Rectorate Authorities, stating that all was a conspiracy organized by the students. The Senate punished the instigators with eight days custody and all others with public reprimands (Pantazidis, 1889).

Mavrokordatos loving affection towards Athenian University endured even after his death, as he ordered his house to be a bequest for sponsoring the students of the medical department.

### **His testament**

Mavrokordatos bequeathed to the University of Athens his own house on Hadrian street (Greek: Αδριανού), with the order to be sold, and the money to be deposited in the Bank of Russia until the establishment of a secure bank in Greece. The interest of this deposit should be available for the financial assistance of two or more students of Athenian Medical School. The house was sold in the year 1852, and 16 equal shares of the National Bank of Greece were purchased.

In the personal documents of the deceased Mavrokordatos only a simple note was found, a handwritten will. Alexandros Mavrokordatos prepared an official document of legitimacy on March 4, 1840, in Iasi, Moldova, to fulfil the "wish" of his deceased son and donated the house under the conditions that the latter had decided. On July 6, 1840, in Athens, the Academic Board waived the rights of the handwritten will of Dimitrios Mavrokordatos and accepted the donation under the modified conditions of his father who was represented by George Alexandrou Mavrokordatos, who was, as mentioned, a regular Professor of Law (Exposition, 1930). The house of Dimitrios AI Mavrokordatos, and an agricultural field of the great teacher, were the first donations to which the University owes its wealthy, although not its buildings (Benefactors and Professors, 1896).

In Mavrokordatos obituary, published in the «Hellas Newspaper» (Greek: Ελλάδα) the 22nd November 1839, one read that the students with whom he had disputed were the first who cried for his death and carried his coffin on their shoulders from the house to the municipal cemetery (Mavrokordatos obituary, 1839). The first scholars of Mavrokordatos' bequest were Anastasios Goudas, who was later the editor of the medical journal "Melissa", and Konstantinos Vousakis (1819 or 1823 -1898), who later became professor of Physiology in the Athenian Medical School (Kouzis, 1939). Ironically the first doctor who had received the honourable scholarship of the "Othonian" University of Athens was Anastasios Goudas, the rebellion pupil of Mavrokordatos, who started the clash with his professor and was banned for that reason (Wills and donations, 1900; National and Kapodistrian University, 1921; Paraskeuas, 2007).

### **In conclusion**

Dimitrios Mavrokordatos was not only the first regular professor of the "Othonian" University in Athens, but was actually the founder of modern human anatomy

and physiology in Greece (Pournaropoulos, 1980) and of Hellenic nomenclature for anatomy and medicine of the new era in Greece. His passion was so great that in his testament he only cared about his students.

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