

A parallel between two important Romanian histologists of twentieth century: Alexandru Țupa (1886–1956) and Cornel Crișan (1895–1958)

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Abstract

During the XXth century, the evolution of histology in Romania was marked by different personalities. The aim of our paper is to present a parallel between two Professors of Histology: Alexandru Țupa (1886–1956) and Cornel Crișan (1895–1958) – who were contemporaries. Thus, we bring a homage to their memory, because in 2016 was the anniversary of 130 years since the birth of Al. Țupa and in 2018 will be the commemoration of 60 years since the death of C. Crișan. Both carried out their didactic and scientific activities at two prestigious Faculties of Medicine from Romania: Țupa in Jassy and Crișan in Cluj. Although they had a great respect one for the other, both of them progressing in the same morphological domain, yet it was not a close relationship between them. In our paper, we point out the numerous similarities regarding their lives and careers. The main resemblance between them, seen from a general perspective, is that they did not become unrivalled figures of the School of Medicine from Jassy, respectively from Cluj, even they were remarkable professors and scientists. In our article, we also mention their contribution to the development of histology in Romania.

Keywords: Alexandru Țupa, Cornel Crișan, histology, similarities.

☞ Introduction

Histology is one of the most important items in the fundamental level of medical student's curricula. In Romania, in this domain activated different scientists, part of them having also didactic career. Only few of them became personalities in this science.

The aim of our paper is to present two remarkable histologists: Alexandru Țupa (1886–1956) – Professor at the Jassy Faculty of Medicine – and Cornel Crișan (1895–1958) – Professor at the Cluj Faculty of Medicine, who were contemporaries and who had many similarities, leading to a scientific emulation between them. The result was positive for the development of histology in Romania. We chose to do a parallel between these two histologists, in order to continue one of our previous projects: research on the professional relations between the Cluj School of Medicine and the Jassy School of Medicine. The connections between them were influenced by different factors, an important role having the resemblances or differences among important members of the two academic communities. Doing medico-historical overview about the features of various protagonists from these educational academic medical centers, we noticed some interesting and unexpected aspects regarding the moving force of human characters in the development of the links between these two Faculties of Medicine from Romania. In a previous paper [1], we revealed the "fight" that occurred between two giant anatomists: Victor Papilian (1888–1956) and Grigore T. Popa (1892–1948), concerning the first Romanian anatomical treatise, elaborated by Papilian. Actually, it was a sort of struggle on the national primacy between the Cluj and the Jassy Schools of Anatomy.

☞ Some data about the evolution of histology in Jassy and Cluj before the period when Alexandru Țupa and Cornel Crișan became professors

We begin this part of our paper focusing our attention on histology at the Faculty of Medicine in Jassy. During its first year of its existence – 1879/1880 – the Anatomy and Histology were united in the same Department. Surgeon Leon Sculy (1853–1912) – who was at that time the Dean of the Faculty – was substitute Professor at the Anatomy–Histology Chair. In the next year, he took over the Chair of Surgical Clinic of the same Faculty.

In 1881, Aristide Peride (1848–1906) became Head of Anatomy. He assumed the responsibility to organize in Jassy a modern Chair of Anatomy and to build a proper building, suitable for the development of anatomy in time, task fulfill in 1895.

Due to the insistences of Peride, in 1884 Histology was separated from Anatomy [2].

It is necessary to underline that Sculy continued to substitute the Histology between 1881 and 1884.

Even a separate Department, until 1890 Histology had no leadership. During the interval 1884–1890, the substitute Professor of Histology was Vasile Negel (1854–1923). At that time, he led the Department of Pathology and also substituted the management of the Clinical of Dermato-Veneral Diseases at the same Faculty.

A new period in the evolution of the Histology Chair began in 1890, when Emil Pușcariu (1859–1928) was appointed full Professor. Meantime, he activated as bacteriologist (one of his achievements being the Institute of Rabies in Jassy, founded in 1891) [3]. He had a long career as histologist, until 1928, when he died.

Around the same time, at the Faculty of Science from the University in Jassy, Histology was taught by Prof. Paul Bujor (1862–1952). He became known as the founder of the Scientific School of Morphology and Zoology from same city.

Even under Pușcariu's leadership, the histological scientific activities encountered major difficulties, the Chair having only a room located at the Institute of Anatomy. However, a year before Pușcariu's death, in 1926–1927, the Histology Chair was installed in the new built wing of the Faculty of Medicine in Jassy. The staff also was developed, by the employment of two junior assistants: Vasile Mârza (1902–1995) – the future Professor of the same Department – and Gheorghe Chipail (1905–1997) – the future Professor of the Third Surgical Clinic from the same Faculty [3]. In the '20th, the Lecture of Histology was entitled "Histology and histogenesis".

After Emil Pușcariu's death, at the Histology Chair followed another two years of substitution, fulfilled by the well-known anatomist Prof. Grigore T. Popa (1892–1948).

The substitution ended in 1930, when the Faculty's Council recommended Alexandru Țupa as Professor and Director of this Department. His appointment marked depth and originality in histological research [4].

Having in mind this aspect, we can assume the hypothesis that substitute professors, having different medical specializations, delayed the scientific evolution of the Histology Department at the Faculty of Medicine from Jassy.

The next act in this overview refers to the Histology in the academic learning from Cluj.

Unlike Histology from the Jassy medical learning, the histological education system from Cluj started earlier and was in a quasi-constant scientific development.

At the "Franz Joseph" Royal Hungarian University from Cluj (founded in 1872), the first Professor of Histology was István Apáthy (1863–1922). He was zoologist and histologist. He focused his attention on biology, zoology, comparative zoology and histology. He was preoccupied especially to the study of the nervous system and to the improvement of some microscopic staining techniques [5].

After the end of the First World War and the great Union of Transylvania with Romania, in 1919, the Hungarian University of Cluj ended its activity. In the same year, in Cluj was founded the Romanian University, named symbolically the "Upper Dacia University". Between 1919 and 1923, the Lectures of Histology for medical students were held by Prof. Ioan A. Scriban (1879–1937), who was full Professor of the Faculty of Science from the same University. He taught lectures in parallel at two faculties: Science and Medicine. It is interesting to note that he began his professional training at the Faculty of Sciences from the Jassy University, under Paul Bujor's leadership. Scriban also graduated the Jassy Faculty of Medicine and became a Docent in Histology in 1911. Then he was Lecturer at the University of Jassy. Between 1919 and 1937, he was full Professor and Head of the Chair of Zoology and Comparative Anatomy at the Faculty of Science from Cluj. One of the most important medical research themes of Scriban was the primitive progressive myopathies.

Different deans of the Faculty of Medicine in Cluj tried to found a special Chair of Histology for this Faculty. Thus, in 1923 was appointed the first Head of this Chair – Prof. Petru Gălășescu (1870–1938). Due to unknown reasons, he activated in the medical academic staff of Cluj only one year (1923/1924), then he transferred to the Jassy Faculty of Medicine, at the Department of Pathology [6].

A very significant period in the evolution of the Chair of Histology at the Faculty of Medicine from Cluj started in 1924, when Ioan Drăgoiu (1873–1941) was elected Professor and Head of this Chair. He was veterinary physician, a fact that allowed him to perform many experimental researches, especially focused on muscles. His training was in histology and in physiology. Before his career in Cluj, he was Lecturer at the Higher School of Veterinary Medicine in Bucharest. He constantly activated at Cluj Chair of Histology for 17 years, between 1924 until his death, happened in 1941.

The successor of Drăgoiu at Head of this Chair was Cornel Crișan.



Professor Alexandru Țupa
(1886–1956).



Professor Cornel Crișan
(1895–1958).

☞ Overview on the biography of Țupa

Alexandru Țupa was born on March 9, 1886, at Dumbrăveni (Botoșani District) in a family of teachers, who gave him a through education. He attended the Primary School in Botoșani and the High School at the "August Treboniu Laurian" College in the same town. This College was the most prestigious High School in that town. Țupa was a very diligent pupil and graduated in 1904. Then he became student at the Bucharest Faculty of Medicine.

In the internships context, he activated in different hospitals from Bucharest, including "Mărcuța" Psychiatric Hospital. It is useful to point out that Țupa cared with devotion and patience the hardest cases, including the mental alienated from the "Mărcuța" Madhouse, led by Prof. Alexandru Obregia (1860–1937). Țupa's traits of character: patience, perseverance, meticulously, capacity to accept a failure and care of others helped him in the complex laboratory activity which he carried out later, but also in the administrative activities that he further fulfilled. At that time, he did research on thyroid gland at the mentally alienated. His interest in endocrinology led him to do some studies on pluriglandular syndromes.

At the age of 27 years (in 1913), Țupa participated at the Second Balkan War.

During the First World War, between 1916 and 1918, he came in refuge from Bucharest to Jassy. There he worked at the “Socola” Hospital, under the leadership of Prof. Constantin Ion Parhon (1874–1969). Țupa also activated in different hospitals for contagious illness, *e.g.*, in the fight against cholera. One of these hospitals was led by Dr. Devaux, member the French Medical Mission in Jassy [7].

Țupa became Doctor in Medicine and Pharmacy in 1918, at Jassy. The fact that he did not obtain this title in Bucharest, but in Jassy can be explained by the decision of the Jassy Faculty of Medicine to grant doctoral titles to graduates arrived in refuge from Bucharest [3].

In 1918, Țupa went to France, in Marseilles, together with Prof. Ioan Cantacuzino (1863–1934) for fighting Spanish influenza and typhus epidemics. On that occasion, Țupa did some researches on these infectious diseases. He also studied the cytology of cerebrospinal fluid in typhus (1919). He was the first who revealed that in the subtle or asymptomatic typhus forms, the diagnosis can be put by cytological examinations of the cerebrospinal fluid.

Afterwards, between 1919 and 1921, he remained in Paris, working as foreign Assistant under the guidance of the prestigious neuroanatomist Prof. Jean Nageotte (1866–1948), at Collège de France. There, Țupa specialized in neuro-histology [8].

Returned to Romania, in the period 1921–1924 he was Lecturer at the Faculty of Medicine in Bucharest, at the Neurological Clinic, headed by Prof. Gheorghe Marinescu (1863–1938). At that time (in 1921), Țupa studied the chronaxie of the facial nerve and facial muscles in humans.

Between 1922 and 1930, he was Chief of Laboratory at the Institute of Serum and Vaccines from Bucharest, Institute created and directed by Prof. I. Cantacuzino. In the period 1926–1930, Țupa was also Assistant at the Chair of Experimental Pathology of the Bucharest Faculty of Medicine, Chair headed by I. Cantacuzino [9]. At that time, Țupa did research on poliomyelitis, experimental rabies, lymphogranulomatosis, etc.

On the recommendation of Cantacuzino, Țupa was able to gain a scholarship from the Rockefeller Foundation, in order to complete his postdoctoral training. Thus, in 1925–1926, at Lyon, he studied different histo-physiological topics, under the leadership of Prof. Albert Policard (1881–1972) [10]. Țupa appreciated very much Policard. Thus, after Țupa became Professor of Histology in Jassy, in 1932 he recommended one of his assistants – Vasile Mârza – to do postdoctoral studies under the supervision of Prof. Policard.

During the period when he was Professor, Țupa brought valuable contributions to various histological topics, proving a great scientific probity. He studied cells from the central nervous system, such as microglia in normal and in pathological conditions. He also studies cellular organelle, such as the Golgi apparatus from the submaxillary glands. Țupa had a great ability in doing different histological techniques; his name is linked to a technique for highlighting the chondriome [8].

In the 30s and 40s, he reorganized the Laboratory of Histology, creating conditions for scientific research. He prepared with great care his lectures for students,

frequently participating and supervising the students' practical works. It is interesting that the Lecture had different name, *e.g.*, in 1937/1938 it was entitled “Cytology, embryology, histology, general and special histogenesis”.

Simultaneously, between 1939–1941 Țupa substituted the Department of Pathology at the same Jassy Faculty.

In 1946, he published a Textbook of Histology.

Prof. Țupa was the author of only two chapters: “Genital System” and “Epithelia”, from the unique Textbook of Histology coordinated by Crișan.

Țupa was twice Dean of this Faculty: in 1941–1942 and in 1944–1946 [11].

Concerning his attitude at the students' exams, he was apparently severe with students. However, they remained pleasantly surprised by the understanding way in which he acted during the exams and by his patience in listening all students' answers, even those not sufficiently prepared [12].

During his remarkable career, he was decorated with important Medals and Orders: Order of the Crown of Romania with swords in the rank of knight, Legion of Honor in the rank of knight, Medal of the French Reconnaissance, Medal of Honor of the Health Service of the Army (from France), etc.

☞ Short presentation of Crișan's biography

Cornel Crișan was born in March 18, 1895, in Beiuș (Bihar District), in a family with low financial resources. He graduated College in 1913, in the same town. After few months, he received a scholarship that allowed him to become student at the Faculty of Medicine in Budapest.

Due to the outbreak of the First World War, in 1914 he stopped his studies. In the same year, he was mobilized and sent to the Italian front. Nearly at the end of the war, in 1918, he was demobilized and returned in his native place. Then he participated at the Romanian National Guards. He had the privilege of participating, as delegate, at the historical event – the Great National Assembly from Alba Iulia, which took place on the December 1, 1918 [13].

After this rather long break in his medical studies, in 1920 Crișan continued them at the Romanian Faculty of Medicine from Cluj. In the same year, he was appointed Junior Assistant at the Institute of Histology and Embryology, which was part of the Faculty of Sciences from Cluj. The leader of this Chair was Prof. Ioan Scriban. Under his guidance, Crișan specialized in Morphology. In 1921, he was promoted to Assistant at the same Chair. Two years later, he graduated medicine [14].

Between 1924 and 1925, obtaining a Rockefeller scholarship, he developed his histological and embryological technique and scientific knowledge at the Anatomy and Histology Institute of the Faculty of Medicine from Heidelberg. His masters were Prof. Erich Kallius (1867–1935) and Prof. Herman Hoepke (1889–1993).

Returned to Cluj, in 1925 Crișan obtained the title of Doctor in Medicine and Surgery. In the same year, he continued his career at the Chair of Histology of the Faculty of Medicine, where he was promoted Lecturer. The Head of the Chair was Prof. Drăgoiu, who stimulated Crișan's activity in Morphology. Therefore, Crișan became one of the most loyal collaborators of his master [15].

After the unexpected death of Drăgoiu, in 1941

Crișan was appointed substitute Professor. A year later, he became full Professor.

At the age of 59 years, in 1954 Crișan became Doctor in Medical Sciences.

Crișan made different experiments in the immunoclinical research coordinated by Prof. Iuliu Moldovan (1882–1966). Thus, Crișan observed that the charcoal particles injected in guinea pigs were phagocyted by the reticuloendothelial cells, distributed in various organs [16].

Doing meticulous embryological research, he found the fifth arterial arc at the white mouse embryo.

He brought new evidences for the theories regarding the development of thyroid, parathyroid and thymic systems in white mouse.

In 1942, he published two monographs regarding the above-mentioned findings. They were awarded with the Oroveanu Prize of the Romanian Academy [14, 15].

It is useful to mention that, in 1946, being constantly informed with different scientific discoveries, Crișan published the article entitled “The electron microscope”.

Two years later, in 1948, his studies entitled “The action of colchicine on areas with blast potentials” and “The analogy between the action of colchicine to plant and frog tadpole” led to later investigations at two Institutes of Anatomy and Histology from Ankara and Montevideo [17].

A significant achievement of Crișan was represented by the second and third edition – revised and updated – of Drăgoiu’s Treaty, entitled “Elements of Histology and Microscopic Technique”. They were published in 1942 and 1946 and became the basic Textbooks of Histology, used for more than a decade in almost all faculties of medicine from Romania.

At the end of his career, Crișan coordinated an ample Treaty of Histology, in two volumes, known in the 50s and 60s as the “Unique Histology Textbook” (1955 and 1957). Their authors were L. Adlersberg, Șerban Brătianu (1902–?), Cornel Crișan, Mihail Gründisch (1906–?), Ardeal Hagî Paraschiv (1892–1976), Ion T. Niculescu (1895–1957), Constanța Râmniceanu and Alexandru Țupa. It is interesting that, at the first volume, Crișan was mentioned as Editor, while at the second volume, the name of Crișan was not mentioned neither as Editor, nor as Coordinator. It should be noted the length and the wealth of iconography of this Treatise. The first volume has 564 pages, 465 figures in the text and 10 colored plates; the second volume has 556 pages, 463 figures in the text and 16 colored plates. Crișan elaborated in the first volume the subchapter “Generalities in sense organs”. In the second volume, he wrote two chapters: “Cytology” and “Cells evolution and reproduction of individuals”.

Due to political conjuncture of the 50s, Crișan had to accept some concessions in drafting the “Introduction” chapter of the second volume. Thus, this chapter contains few ideological paragraphs, such as: “In Soviet times, [...] as a result of deepening the philosophy of dialectical materialism, happened a true purification of Soviet histology from all misconceptions, reactionary, idealistic and metaphysical remains, such as: Virchow’s conception, Weismann–Mendelian–Morgan’s doctrine” [18]. Analyzing from the historical perspective this situation, it appears

the following question: did Crișan himself wrote these phrases or someone else (*e.g.*, a secretary of the publishing house) gave a help in adjusting the “Introduction” according to the ideology of the Communist regime? Unfortunately, it is impossible to know the reality. What is known is that during the same period many medical books edited in Romania (most of them published in Bucharest) contained different ideological intrusions.

In 1955, Crișan was awarded with the Order of Labor, third grade.

About Crișan’s character, his colleague and friend Professor Valeriu Bologa (1892–1971) noted that Crișan was: “a man of exemplary honesty [...], having an unshakeable line of probity and humanity, a devoted professor to the education of youth, an educator not only by talking, but by his own life example” [19].

☞ Similarities between Țupa and Crișan

As we mentioned before, both were well known Romanian histologists. They were contemporaries, Țupa being nine years older than Crișan.

Both were born at the end of the XIXth century and lived in three different historical epochs: before World War I, during the interwar period and at the beginning of the Communist regime. They lived through various dictatorial periods, which imposed a sort of adaptability to be able to continue their didactic careers.

For each of them, the First World War was a break in their medical evolution. Țupa was at that time a young physician and Crișan was a student in medicine.

Țupa and Crișan were devoted to morphological researches and for teaching histological lectures, over 25 years.

Both of them had a particularly prestige as Professors and an outstanding didactic talent. Both of them had many qualities of researcher, having a real researcher spirit. They became authorities in Histology, proving a total devotion and identification with the science they professed. They resembled in erudition.

Țupa and Crișan published Textbooks of Histology before writing the chapters in the unique Textbook of Histology edited in the ’50.

In relation to the others, both of them had a reserved attitude, a reticent behavior, which reached, especially to Cornel Crișan, at inflexibility. In fact, the attitude displayed by Crișan was a sort of dissimulation of his deep sensitivity. One of his former students – Elena Carpen – noted that “those, few in number, who managed to get closer to C. Crișan and to know him better, could tell that he had multiple spiritual valences” [14].

Almost unknown is that both of them lived in modest conditions in the Departments they directed. Sometimes, Țupa could be heard playing the violin in the evening.

Both of them had a particular attention for the dress code. It was known that Prof. Țupa always wore a black ascot tie, although after the Second World War it was used only the simple tie at the neck. The discrepancy was more evident in the Communist period, when the tie was dropped, the clothes model being of workers’ style.

Remembering Crișan, Valeriu Anania noted that “Before the exam session, the Professor of Histology [Crișan]

exposed an ad that sounds like this: « Because the exam is a solemn moment in the life of a student, distinguished colleagues are invited to be present in a corresponding dress code ». This meant: recently haircut and shaved, Sunday suit, with tie and ironed pants, polished shoes, cared nails. Professor himself was present in black suit wearing white gloves” [20].

Concerning their attitudes at exams, both of them were apparently severe with students. However, the students remained pleasantly surprised by the patience with which Țupa and also Crișan listened all the answers of their students.

☒ Differences between Țupa and Crișan

For the beginning of this subchapter, we refer to the importance that school education had on the temper and on the subsequent training of the two future Professors. The undergraduate instruction was different for each of them. Being pupil in Botoșani, having some French style influences, and also the two specializations in France (totaling four years) imprinted to Țupa two important features: a wide, clear and elegant way of thinking and an inclination towards the French culture. Țupa appropriated a comprehension way of thinking, feeling and expressing sympathy. He was always solicitous about the welfare of his students, sympathetic toward those having family problems, or preoccupied to help sick people. In addition, the fact that he participated in two anti-epidemic campaigns – in 1913 and in 1918 – helped him to develop his very human attitude.

However, this not stopped Țupa to openly criticize someone, but only if it was necessary. Frequently, he defended different persons. He was “an unequaled friend, who often deprived himself to be able to help his colleagues and friends in distress”, as Mârza mentioned [7].

Regarding Crișan’s high school education, he attended College at Beiuș. The sobriety and the rigor of the German school type, as well as the specialization (one year) in Heidelberg, marked a strong brand on Crișan’s way of thinking.

A great difference between Țupa and Crișan was that the former began to teach the Histology only over a decade after his doctoral thesis. The benefit for Crișan was far greater, as he began his scientific and didactic career as histologist, while he was still student. Thus, he focused with more assiduity in gathering material on histological structures.

Another difference between these remarkable Professors was that only Țupa had the possibility to put into evidence his talent as organizer, being Dean.

☒ Conclusions

Al. Țupa and C. Crișan were remarkable masters of histology in Romanian academic learning, during the XXth century. Both of them had an important help in their training as scientists, given by their professors. Țupa associated his research in histology with the research in pathology. A significant part of Crișan’s histological researches was oriented on embryological themes. Even

both of them were severe during the student’s exam, yet they were appreciated by their students for their humanism. Studying their careers from historic perspective, it can be observed that there were many similarities.

Conflict of interests

The author declares that he has no conflict of interests.

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