



ACADEMY OF ROMANIAN SCIENTISTS

Section no. 8 of AOSR – Medical Sciences

President of the section: Prof. Habil. DrHC. CS1. Dr. Dan RIGA

CENTENARY OF THE GREAT UNION (1918–2018)

**World-Class Romanian Personalities
of Universal Science and Medicine**

- 1. Carol DAVILA (1828 – 1884)**
- 2. Victor BABEȘ (1854 – 1926)**
- 3. Thoma IONESCU (1860 – 1926)**
- 4. Gheorghe MARINESCU (1863 – 1938)**
- 5. Nicolae PAULESCU (1869 – 1931)**
- 6. Constantin LEVADITI (1874 – 1953)**
- 7. Francisc Iosif RAINER (1874 – 1944)**
- 8. Daniel DANIELOPOLU (1884 – 1855)**
- 9. Ana ASLAN (1897 – 1988)**
- 10. George Emil PALADE (1912 – 2008)**

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Carol DAVILA (1828 – 1884)



Carlo Antonio Francesco d'Avila was born 1828 in Parma. His parents were unknown. He was protected by the countess d'Agoult. She helped him to study medicine in Paris. There were rumors, that he was her son with the musician Franz Liszt. But Dr. G. Brătescu discovered in archives from Budapest letters sent by the countess d'Agoult to Franz Liszt in which she insisted, that one of their daughters should marry Davila. This excludes the legend of his ancestry.

After graduating in Paris 1853 and participating to the eradication of a cholera epidemic in Champagne and Cher he applied for the position of the personal physician of the Shah of Persia or the organizer of the medical system in Wallachia. He was placed second and arrived in Wallachia on March 13, 1853. He also taught chemistry at the University of Bucharest. He organized the both the military and the civil medical education and in Romania also the medical service of the Army. In 1860 he was advanced to the rank of general. Later, during the Independence War he organized the ambulances. He founded an asylum for orphans, he named Elena Doamnă. His first wife, Maria Marsille died after one year at childbirth. His second wife, Ana Racoviță, gave him four children, two girls and two boys. Carol Davila's health was feeble, he suffered from polyarticular rheumatism, one arm was stiffen; after the inspection of the jail Telega he had typhus and during the Independence War in 1877 he suffered from a generalized furunculosis with anthrax of the neck, that needed emergency- operation. He often suffered from sciatica.

In the history of Romanian medicine he remains as the founder of the military and civil medical service, of a school for surgeon-assistants in 1855, in 1856 of a secondary surgery school. This school became soon the National School of Medicine and Pharmacy. Ten years later it grows into the Faculty of Medicine Bucharest. Meanwhile Davila founded pharmaceutical and veterinary instruction. He also founded the Association of Romanian Physicians and the newspapers „Hospital Gazette” / „Gazeta spitalelor” and „Monitorul medical”. He founded another orphanage for boys, a school for deaf-mutes, free medical consultations for the poor, he edited Vasile Alecsandri's collection of folk-poems. On Mai 31, 1868, he received the Romanian citizenship by royal decree. He was awarded with Romanian and Turkish decorations because his ambulances treated 13.000 diseased and wounded soldiers, saving hundreds or even thousands of lives. He also organized an ambulance for the French-Prussian war in 1870. After Mai 5, 1874 he was initiated in freemasonry in the Lodge „The Wisemen of Heliopolis”

His wife died because of an accident, he gave her strychnine instead of quinine. Davila survived for 10 years, years of indefatigable, hard work on all fronts.

In 1903, at the order of the War Ministry, Constantin Brâncuși produces a sculpture of Carol Davila, which was exposed in the court of the Military Hospital Bucharest. As late as 1912 the bust was cast in bronze with some changes compared with the original. Many streets, hospitals bear his name, the University of Medicine in Bucharest is called Carol Davila.

In 2003 he was elected member post-mortem of the Romanian Academy.

Victor BABEȘ (1854 – 1926)



The first world-famous Rumanian savant was born in Vienna on July 28, 1854, as the son of the Romanian Vincentiu Babeș and the Austrian Sofia, born Goldschneider, the second of nine children of the family. His father was Romanian patriot and a scholar. In the year 1849 he was a superintendent of the Orthodox Rumanian schools in the district Caraș and later he became a well-known lawyer. Victor Babeș went to primary school in Vienna, graduating two classes in one year due to remarkable cognitive skills. He attended secondary school in Lugoj and in Budapest and attended the Faculty of Medicine in Vienna, graduating in Budapest where, in October 1875 he is teaching at the chair of pathologic anatomy being still studying in the last year.

At the age of 14 he was writing poetries and assisted the family earning money with private lessons and by writing doctoral theses for lazy students. He also made translations from Greek and Latin and published them in different periodicals. This shows that he liked to work. In less than two years he wrote his doctoral thesis and he obtained his M.D. in August 1878. Then he returned to Budapest and he observed that the theory of Pasteur and Koch, saying that a specific microbe causes a specific disease is not entirely true. Making necropsies, he found out, that the presence of the microbe in the organism shows different aspects, from an absolutely normal clinical picture to the dead as a result of the disease caused by the respective microbe. The first scientific work, published by Babeș in Romania, was „Considerations on the natural science's ratio to philosophy” issued in no. 10 and 11 / 1879 of „Revista științifică”. In 1881 Babeș got in Budapest the habilitation degree.

In 1882, Babeș made a study journey, visiting among others the medical centers in Vienna, Würzburg, Munich, Tübingen and Paris. Here he finished the paper „About stain methods, especially for viewing diseased tissues, with Safranin and the obtained results”, published in vol 22 of review „Archiw für Mikroskopische Anatomie”, pg. 356-365 (1882). In Paris he got friends with Virchow’s follower, André Victor Cornil and published several important works, about the possibility of urogenital localization of tuberculosis, „Causes of Gambetta’s death”, i.e. septicemia after perforated appendicitis, an original staining technique for the Koch bacillus etc. In 1885, together with Cornil, they published the first treatise on bacteriology in the world, „Les bactéries et leur rôle dans l’étiologie, l’anatomie et l’histologie pathologique des maladies infectieuses”. Being a big success, the book was reedited in 1886 and 1890. He discovered the microbe of the red sweat, the causal agent of humans’ glanders and the pneumococcus. As there was a cholera epidemic in Paris, Babeș identified in the bacteria *Vibrio cholera* small-sized metachromatic intracellular granules, called Babeș-Ernst bodies. In 1884 he wrote too another famous work: „About the vital competition of bacteria”. In 1885 he worked in Pasteur’s laboratories. A year later he began antirabic vaccination in Budapest.

In 1887 the Romanian Parliament adopted a special act to bring back in the country three important savants who already were professors abroad. Victor Babeș was appointed professor for pathological anatomy and bacteriology at the Faculty of Medicine in Bucharest. In the Institute of Bacteriology and Pathology that was created for him, Babeș worked 12 years and then moved into the building of the present Institute Victor Babeș. Among the numerous discoveries and inventions there are: the ascertainment that the neuronal lesions in rabies spread centripetal and a new method of vaccination, called „the Romanian method”. All personal contributions in the domain of rabies are gathered in his famous monography „Traité de la Rage”, published in Paris in 1912.

Victor Babeș discovered an entire family of bacteria, that were named Babesia. These were causing great damages to the stock farmers in USA, especially in Texas. In some towns from Texas streets were named after Victor Babeș. In 1888 he published in Paris a study about microbial haemoglobinuria of the ox. Later

he identified a relative of that bacterium, which could not be visualized at dead animals and it was observed only by taking samples from living animals. Babeş' contributions in immunology were visionary, e.g., he observed, that the diphtheria toxin, when complexed with the antibody loses its toxicity and even strengthens immunogenicity. He discovered the passive immunization in 1889 and thus opened the perspective of serotherapy.

Victor Babeş had major contributions regarding many important infectious diseases, such as tuberculosis, typhoid fever, diphtheria, leprosy (in 1901 he published a vast monography about leprosy in Vienna), pest, glanders etc. He also concerned with social medicine, writing about pellagra. He was a good colleague. He made impressive necrologies for his fellow professors and academicians, although he had been a reserved man all his life.

On December 13, 1924, his 70th anniversary he was officially celebrated, after retiring on the October 1st, 1926, Victor Babeş died on October 26 of the same year. Taking to account his posterity besides his life, he is a worthy candidate for the title of the most important Romanian doctor of all times.

Thoma IONESCU (1860 – 1926)



is the brother of the famous politician Take Ionescu. He was born on September 13, 1860 in Ploiești as the son of a well-known innkeeper in the town. After graduating from high School „Sf. Sava” in Bucharest, he went to Paris in 1879, where he studied both medicine and law. Although his passion was medicine, he graduated law in 1886. 1885 he began working as resident physician at Parisian hospitals and he specialized in surgery. In 1887 he became professor for Anatomy at the Faculty of Medicine in Paris and was awarded the Laborit prize. In 1892 he obtained his M.D. degree with a doctoral thesis entitled „L'évolution intrautérine du colon pélvien” / „Intrauterine Evolution of the Pelvic Colon“. For this scientific work he was named laureate of the Hospitals from Paris, prior to that, in 1890 he had been named laureate of the Paris Academy of Medicine for the paper „The

intrapéritoneal hernias“. Attending a competition, he became aggregate professor and he wrote the chapter „Anatomy of the Digestive Tract” in the important anatomy treaty elaborated by Poirier and Charpy, where he was describing for the first time in medical literature the duodeno-jejunal fossa, the sigmoid beads, the rectum sheath and the rectal fins.

In 1895, by a special act, Thoma Ionescu was appointed professor and the head of the Institute for Topographic Anatomy and Operatory Surgery at the Faculty of Medicine from Bucharest. He also accepted to be professor and director of the Surgery Clinic in Colțea Hospital. In 1897 he founded „Revista de chirurgie” and in 1898 the Society for Surgery. These two achievements gave a platform of affirmation for his disciples, the surgical school he created: Ernest Juvara, Dimitrie Gerota, Amza and Iancu Jianu, Alexandru Cosăcescu, Carnabel, Constantin Daniel, Iacob Iacobovici, Victor Gomoiu, Traian Nasta. It is worthy to be mentioned, that the first president of the Surgical Society was the elder professor Severeanu. Thoma Ionescu's slogan was „anatomical order, precision and rapidity”. Many of Thoma Ionescu's surgical techniques are also valid today, for instance large hysterectomy, the technique of cervical sympathectomy, rectal amputation etc. Further Thoma Ionescu has important contributions in anesthesia, being the initiator of the high spinal anesthesia. This method he communicated even in the United States, in the Mayo Clinic. In 1905, at the International Congress of Surgery in Brussels, Thoma Ionescu presented for the first time in the world, the principles of gastric resection in the non-cancerous diseases of the stomach (partial gastric resections). He also invented an abdominal spacer used in gynecology, he is one of the first, using his own technique, to make the resection of the sacral sympathetic in cases of pelvin pains. In fact, all his discoveries and inventions are due to his profound knowledge of the topographic anatomy and their application in surgery. He has priorities in the anatomy of the pharynx, of the peritoneum, of the pyloric region, etc. He introduced the surgical treatment of hyperthyroidism, he practiced successful nephropexy, splenectomy, some trepanations. In oncology he practiced the ligation of the thoracic duct in some bronchial neoplasms, hepatic resections in local tumours, total clavicle resection in osteosarcoma etc.

In 1909 he was elected member of the French Academy of Surgery and received the „Leion of Honour”.

He died prematurely on March 28, 1926 in Bucharest.

Gheorghe MARINESCU (1863 – 1938)



Gheorghe Marinescu, one of the most important neurologists of his time, was born on February 28, 1863 in Bucharest. His mother registered him in the theological seminary, because it was free of charge, but the son prefers in 1882 to attend simultaneously the Faculty of Medicine and the Faculty of Bridges and Roads. After one year he gave up the second faculty and remained focused on medicine. He enjoyed working at the chair for histology of professor Petrini- Galatz, later he became internal and then laboratory assistant at the Institute for Experimental Pathology and Bacteriology of professor Victor Babeş. In 1887 he is member of the redaction

of the periodical „Spitalul” / „The Hospital”, but he will also publish various clinical observations in other Romanian medical periodicals, sometimes as the collaborator of Babeş, who, in 1889 sustained him to get a scholarship in Paris, where Marinescu worked at the hospital Salpêtrière in the neurological clinic of Jean-Martin Charcot. Here he became friends with the famous Pierre Marie and other colleagues, future famous professors of neurology at diverse great universities. Later he worked in Frankfurt and Berlin, where he published in 1892, together with Victor Babeş, an important atlas of histopathology on the nervous system. In 1897 he obtained his M.D. degree with the thesis „The succulent hand in syringomyelia”, this hand will be named „Marinesco succulent hand”, characterized by swollen, cyanotic, and cold hand, observed when pathological cavities form within the spinal cord. He returned to Bucharest after nine years and worked at Pantelimon hospital, as leader of the department for neurology, then, a year later he took over the chair of neurology at the Faculty of Medicine from Bucharest, which he will lead until 1938, when he will die. Beginning with 1919, the Clinic of Neurology will be at the Colentina Hospital. 1886 Marinescu made the first radiography of the hand in a case of acromegaly and two years later, in 1898 he made the first ever science film about the walking difficulties in neurologic diseases: „The Walking Difficulties of Organic Hemiplegia”.

He was friend, to respect each other, with Santiago Ramón y Cajal, Nobel Prize Laureate for Physiology or Medicine in 1906, due to fundamental contribution to the neuronal theory (contiguity, not continuity), and for clear visualization of a nerve cell with the argentic-silver staining (C. Golgi) modified. His monumental monography „La Cellule Nerveuse”, published in 1909 in Paris had a preface by Ramón y Cajal. Professor Marinescu studied the nervous cell and its pathology thoroughly: neuronophagia, retrograde degeneration as one consequence of sectioning the axon, chromatolysis etc. Since 1906 he studied the problem of nervous syphilis. He also studied rare neurologic diseases. He was one of the first neurologists in the world, who investigated tissue cultures. He made experimental studies on the cerebral cortex and thus he infirmed some false working hypotheses of some contemporary neurologist in the Occident. Together with Radovici he described the palmo-mentonier reflex and the Marinesco-Sjogren Syndrome. His study about coloured-hearing synaesthesia is questionable but his study about traumatic neurosis still is interesting for the specialists. He published „Conditioned Reflexes” together with his disciple Arthur Kreindler. The study „Tonicity of striated muscle” in collaboration with N. Ionescu-Siseşti, Oscar Sager and A. Kreindler had a preface by the Nobel Prize Laureate for Physiology or Medicine, Charles Sherrington. He was furthermore preoccupied by phenomena of life, of aging, hypnosis, epilepsy and philosophical problems, which he which he approached from predominantly materialistic positions, such as „Determinism and Causality in Biology” and his speech when he became member of the Romanian Academy in 1909 entitled „Progress and Tendency of Modern Medicine”. He was member in several European academies and had several times leading positions in the Romanian Academy. In the fights with colleagues he was a dangerous rival, among the defeated there are savants who could have become almost as famous as him, but remained practically unknown, like the neurologist Noica. Marinescu also wrote about great savants in the domain of medicine, like L. Pasteur, S. Ramón y Cajal, Emil Roux, M. Charcot.

Nicolae PAULESCU (1869 – 1931)



The true discoverer of insulin was born in Bucharest on October 30, 1869. After graduating the Mihai Bravu High School, Paulescu leaved for Paris in autumn 1888 in order to study medicine (1888-1898) and enrolled to several faculties: biological chemistry (1897) and general physiology (1898) at the Faculty of Sciences. Until 1897 he obtained three doctorates, in medicine, in biology and in biological chemistry. He worked at the hospital Hôtel-Dieu in Paris. Between 1897 and 1900 he was secondary physician at Notre-Dame du Perpétuel-Secours Hospital in Paris, at professor Lancereaux, under whose influence he developed his skills as a scientist. Here Paulescu studied the spleen, he described the spleen lymphatic system and generally the microcirculation of this organ. Due to his vast knowledge of biochemistry he made numerous observations like medical treatment of aorta aneurism, prandial variations of blood coagulability etc. Also being editorial secretary of the review „Journal de médecine interne”, in 1902 the Académie Française awarded him the order „Palme Academique”.

In 1900 he was appointed professor of physiology at the Faculty of Medicine Bucharest. Many European savants, predominant French (Louis Genevais, Philipp Decourt etc.) consider him to be the founder of endocrinology. Beginning with 1903, he published together with his Parisian master, professor Lancereaux the four volumes of „Traité de médecine” in which many facts about endocrine glands, coagulation of hepatic blood, etc. were mentioned for the first time. The last volume was issued in 1930.

In 1921, Paulescu discovered experimentaly on dogs the treatment of diabetes, by injecting an aqueous extract of the pancreas, named by him pancreine. He communicated his discovery to the Society of Biology and published it in the review „Archives Internationales de Physiologie” under the title „Recherches sur le rôle du pancréas dans l’assimilation nutritive” in the year 1921. Later Frederick Banting, Charles Best and John Macleod published in 1922 an article in which they called Paulescu’s pancreine insulin. For their work, they were honored with the Nobel Prize in Physiology or Medicine in 1923.

Paulescu studied fever very intensively, he even wrote a monography entitled „Treatment of fever“, in which he mainly treats typhoid fever, endocrine and nutrition diseases. In his researches he also investigated heart and respiratory diseases. Due to his solid knowledge of biochemistry he was able in 1930 to formulate the rules for kidney elimination. Three volumes of medical physiology published in French between 1919 and 1922 complete his scientific oeuvre.

Nicolae Paulescu died premature at the age of 61, on July 19, 1931. Today his bust stands in one end of the garden of the Faculty of General Medicine, where it replaces the bust of Petru Groza, on the same pedestal.

In 1990, Paulescu has been elected member post-mortem of the Romanian Academy.

Constantin LEVADITI (1874 – 1953)



Born in Galați on July 19, 1874, Levaditi attended between 1892 and 1898 the Faculty of Medicine Bucharest. In the last year he worked at Victor Babes's Institute of Pathology and Bacteriology. Here he described the actinomycotic shape of the tuberculosis bacillus in the study „Sur la forme actinomycosique du bacille de la tuberculose” (1897). In 1898 he went to Paris and he worked for three years in Charrin's laboratory on general and experimental pathology, at the College de France. During the next two years he studied in Frankfurt at Paul Ehrlich's Institute for Experimental Therapy. Then he returned to Paris and began working at the Pasteur Institute, in 1901 and 1902 under Mecnikov and afterwards in his own laboratory. In Paris he published the study „Importance of leucocyte granulations”. He will remain employee of Pasteur Institute until his retirement in 1941, after his retirement he worked some years at the Fournier Institute. In 1903 he

began studying the spirochete. He identified this microbe in congenital syphilis and was appointed in 1905 assistant at the Pasteur Institute. In 1906 he introduced in bacteriology the rapid Levaditi-Manouelian method of silver impregnation to detect spirochaeta pallida in tissues.

For three years, between 1909 and 1911 he worked in Vienna with Karl Landsteiner, detecting the poliomyelitis virus in various tissues, other than nervous tissue; this fact will be useful for the preparation of antipolio vaccine. Here he also demonstrated that the filterable poliovirus can be inoculated to apes and thus he provided the basis of virology. Together with C. Kling he made beginning with 1912 studies on poliomyelitis epidemiology about the contamination by direct contact and showing that after healing immunity appears. An ample study about this research, also containing prophylactic indications, was published in 1913 in Paris.

In 1920-1921 he followed the call and became professor of bacteriology at the Faculty of Medicine in Cluj. In 1921 he showed the elective tropism for certain tissues of viruses, and thus he contributed to the development of virology. He was one of the promoters of syphilis-treatment with bismuth. He formed a virology school, among his followers there were Șt. S. Nicolau, A. Vaisman, P. Lépine. Together with them he studied several viral diseases like poliomyelitis, herpes, rabia, encephalitis etc, He detected relations between viruses and some forms of cancer. He classified the viruses according to their size, according to the possibilities of their filtration through colodium membrans. He described the neurotropic skin diseases. His last study refers to the effects of terramycin.

In 1928 he became member of the Academy for Medicine in Paris, in 1948 he is named due to the commitment of Ștefan S. Nicolau honorary member of the Academy of Romanian Populaire Republic. For his achievements he was awarded in 1902 with the Montyon Prize, and the Breant Prize of the French Academy of Sciences in the same year, and in 1931 with the Paul Ehrlich Prize for Chemotherapy.

Constantin Levaditi died on September 5, 1953.

Francisc Iosif RAINER (1874 – 1944)



The father of modern anthropology and anatomy was born on December 28, 1874 in Rohozna, Bukovina, as the son of an employee of Austrian railways. Being a child he moved with his family to Iasi and then to Bucharest, where he attended Sf. Sava High School. In 1892 he attended the Faculty of Medicine Bucharest and two years later he is admitted as preparatory at the histology chair of professor Obregia. Another two years later, he became preparatory in the laboratory of the medical clinic of Colțea hospital, under professor G. Stoicescu, and he will remain there for 17 years, from 1906 as the head of the laboratory. In 1899 he made a study journey to Switzerland and Germany. In January 1900 he created together with I. Bruckner the „Anatomic Society”. Then he will work for two summers in the laboratory for bacteriology in Sulina.

The year 1903 was an eventful year for Rainer: he married Marta Trancu, the first woman surgeon in Romania, he obtained his doctorate title with the thesis „About a particular form of liver cirrhosis” and he presented the paper „A rare topography of human appendix” at the second Congress of the Romanian Association for Progress and Popularization of Science. In

1904 he was naturalized and in 1905 he was teaching at the „Școala specială de subchirurgi” in Bucharest. In 1907 he was secondary physician at the Filaret Sanatorium for tuberculosis, beginning with 1912 he was lecturer at the Medical Clinic of Colțea Hospital. One year later he became professor for descriptive anatomy at the Faculty of Medicine Iasi. He was decorated with the „Military Virtue” for his participation to the anticholera-campaign during the Balkan War from 1913. He made study journeys, he visited the marine biological laboratory of the Balears in Palma de Mallorca, he went to Dresda, Berlin, later to England, Sweden and Greece.

Beginning with 1916, together with his wife, he organized several military hospitals for the wounded in occupied Bucharest, where he was ordered to remain. Thus, by intervention at the German commandment, he saved the collections of the medical laboratories of the Faculty of Medicine, which the Bulgarians wanted to take as spoils of war. In 1917, under occupation, he inaugurated a course on anatomy at the Faculty of Medicine Bucharest, but he will be appointed professor for Anatomy and Embryology not until 1920. A year later, he became professor of artistic anatomy at the Superior School of Fine-Arts in Bucharest and in the next year, in 1922 he overtook the chair of Anatomy, Kinesiology and Anthropology at the Superior Institute on Physical Education in Bucharest. Between 1927 and 1932 he made anthropological studies in Nereju-Mare in Vrancea, in Fundul Moldovei in Bucovina and in Drăguș – Făgăraș and he will communicate and publish them at the Romanian Academy. In 1939 the Academy will award him a prize for this work. Rainer presented numerous lectures at the Ateneul Român, the University Foundation Carol I and at Dalles Hall. He was elected member of the Medical Academy of Romania.

In 1940 he inaugurated the Institute of Anthropology Bucharest and he will be its honorific director until his death, on August 5, 1946 due to bronchial cancer. In 1943 he was elected honorary member of the Romanian Academy.

His posterity is important because of the school he formed, many of his disciples became professors too: Ilie Th. Riga, Alfred Teitel, George Em. Palade, Stefan M. Milcu, Benedict Menkes, Zalman Iagnov, Grigore T. Popa, Ion Țurari, Ion Juvara, Valentin Neagu, Eugen Floru, Ion Cotăescu, Horia Dumitrescu, Natalia Stoenescu-Neagu, Raul Robacki, Alexandru Tudor, O. Vlăduțiu, M. Lecca. His contributions in the field of anatomy are important. He described for the first time the heart lymphatics. Because he stated that a scientific work becomes valuable only in the moment, when it cannot be summarized, in Brauss' Treaty on Anatomy, we find the following remark: „The heart lymphatics are described by Francisc J. Rainer. Because the work cannot be summarized, we reproduce it *in extenso*: ...”. This can help us to better understand Rainer's brilliance.

Daniel DANIELOPOLU (1884 – 1955)



The founder of the Academy of Medicine Bucharest was born on April 25, 1884 in Bucharest. He remains in Romanian history of medicine as the unifier of clinic and physiopathology, of therapeutics and pharmacodynamics. He attended the Faculty of Medicine Bucharest, between 1904 and 1906 he was external at the service of G. I. Stoicescu and between 1906 and 1910 he was intern at professor Buicliu's clinic. Parallel he worked from 1907 (until 1916) as assistant at the chair of experimental medicine of professor I. Cantacuzino. 1910 he took his doctoral degree with the thesis: „Contributions to the Study of Raw Turberculin” and he was appointed chief of the medical clinic of professor Buicliu at Brâncovenesc Hospital. For three years he lectured free courses about cardiology, then for two years, until 1914, a course about renal insufficiency. The next two years are predominantly dedicated to cardiology and he published the monography „Cardiac Arrhythmia” after introducing in Romanian medical clinic the use of the electrocardiography. Due to the experience gained during WW I, he wrote another monography „Exanthematic typhus”, which had a very large extent for that time in the world, and he published it in Paris in 1919. In this work he used the experience gained in a great hospital for infectious diseases in Iasi. Starting with 1909, due to his deep knowledge of pharmacodynamics and physiopathology, he was the first in the world to recommend administration of fractional strophanthin in cardiac insufficiency. In 1916 he published a new monography on cardiology: „Pathogenesis of angina pectoris and its treatment with digitalis”. It will be translated to Russian in Leningrad in spite of the questionable value of this treatment, abandoned half a century ago.

In 1920 he became the successor of professor Buicliu at the head of the medical clinic at Brâncovenesc Hospital. He convinced the authorities of that time to create at the Filantropia Hospital an institute for internal medicine with international reputation. Here was a physiology laboratory where thoroughgoing investigations about physiopathology, pharmacodynamics and therapeutics could be made and based on them Danielopolu stated two mechanisms that ensure the equilibrium of the entire organism: the interstimulant antagonistic mechanism and the amphotrophic circulatory mechanism. Danielopolu stated this theory in 1928 and then completed and adjusted it in the years 1932, 1938, 1944 and 1947. In this theory of his, the antagonism between the sympathetic vegetative and the parasympathetic system is not absolute, but interstimulant, meaning that excitation generates inhibition and reciprocally inhibition generates excitation. E.g., acetylcholine, the chemical mediator of the parasympathetic system produces bradycardia, but simultaneously launches production of noradrenalin, the chemical mediator of the sympathetic system, which induces tachycardia. Many of these problems of the vegetative nervous system Danielopolu deals with in his monography entitled „Le système nerveux de la vie végétative”, published in Paris in 1932. Dealing with these problems, Danielopolu was a precursor of Hans Selye, who based the theory of stress and of adaptation diseases and of Walter Cannon, the author of the theory of salvation reaction consecutive to emotions, that activate hypersecretion of adrenaline.

Danielopolu was a very good theoretician. He formulated an original conception, due to which every substance and physical agent exerts both a specific action on the organism and a nonspecific action. The Romanian savant intuited in a way the existence of inverse connections which ensure the regulation of physiologic processes. According to the principle of the unspecific mixt therapy, Danielopolu figured out a series of synergic medicamentous associations, which are effective in various diseases such as: visceral pains, asthmatic attacks, anaphylactic reactions. He proposed massive therapy with salicylic acid in acute polyarticular rheumatism, the therapy of bronchial asthma by slowing down parasympathetic system, treatment of hypertonia practicing splanchosolarektomia etc.

In 1944-1945 Danielopolu was minister for health and social insurance. Between 1938 and 1948 he was secretary of the Academy of Medical Sciences. He leaded several important medical reviews, he was honorary member of the Romanian Academy since 1938 and since 1948 he was member of the Academy of Romanian Populaire Republic. The international recognition also was commensurate with his merits.

Ana ASLAN (1897 – 1988)



Regarding the value and the merits, this short presentation should have been that of Ion Cantacuzino. But in this way he would be the third microbiologist from ten savants and there would not been represented any woman, what would have been a sort of imbalance and even an injustice.

The inventor of Gerovital H3 was born in Braila, on January 1, 1897. She attended the Faculty of Medicine and Pharmacy in Bucharest from 1915 till 1922. After graduating she began her teaching career first as preparator working with professor Danielopolu at the Faculty of

Medicine and Pharmacy in Bucharest, where she will be a lector from 1936 till 1946. She obtained her M.D. degree with a doctoral thesis on cardiovascular physiology. Since 1936 she was member of the Academy of Medical Sciences from Romania. She was founder member of the Society of Hospitals from Bucharest and of the Society for Neurovegetative Physiology. Between 1946 and 1949 she was the first professor at the Medical Clinic of the newly founded Faculty of Medicine and Pharmacy in Timisoara. Her colleague in Timisoara, the surgeon Pius Brânzei was using novocaine successfully in the treatment of surgical wounds. While studying the effects of novocaine, Ana Aslan deepened her knowledge by studying papers from C. I. Parhon, Gh. Marinescu, J.-M. Charcot and M. Bürger regarding the aging process. She wrote papers about the effect of novocaine upon the respiratory system, in diseases as embolism, arthrosis. She comprehended, that novocaine, besides indisputable positive local effects, also has eutrophic and positive effects upon the nervous system. Discussing with Parhon the effects of novocaine in senescence, he proposes her in the year 1949 the superintendence of an experimental research department at the Institute of Endocrinology from Bucharest. She will activate here until 1958. During this period she will create and protect by patent two worldwide famous drugs: Gerovital H3 and Aslavital.

In 1958 Ana Aslan became the director of the Institute of Geriatrics, which in 1974 will be named National Institute for Gerontology and Geriatrics. Being a disciple of Danielopolu and Parhon, she was able to investigate and she explored domains of biological and medical sciences thoroughly. She also was lucky to have very capable collaborators which she qualified the same way she had been stimulated by her teachers. Among her disciples were: C. David, Al. Vrăbiescu, Al. Chira, Elena Polovrăgeanu and yet others. Gerovital H3 is procaine hydrochloride, a derivative of novocaine. The Soviets refused to buy it at a price higher than the price of novocaine, but they imported from Romania important quantities of Gerovital H3. (the eternally disadvantageous commerce of Romania with the Soviets, when it was no robbery). As the positive results were communicated since 1956 at international congresses in Germany and Switzerland the drug of Ana Aslan became known as helpful in the permanent fight against ageing. Also in 1956, at the International Conference on Gerontology in Merano, Ana Aslan presented the concept of *Gerontoprophylaxis Aslan*, M. Dumitru later named these principles the 10 commandments of Ana Aslan. Besides the treatment with Gerovital H3 she gave 9 recommendations for maintaining health with reference to alimentation, motion, cultivating positive emotions, prevention of chronic diseases and adequate treatment when chronic diseases appear, best use of leisure time and so on. Universities for the third age were created. Giving geronto-geriatrics a social component, its clinical efficiency was intensified. The idea that ageing begins in the youth is also important. The fact, that Romanian medicine had a leading role in this domain, promoted predominantly by Ana Aslan increased her international appreciation. In 1974 she was elected member of the Romanian Academy. As in all domains, in the field of ageing prophylaxis is more important than treatment.

George Emil PALADE (1912 – 2008)



The only Romanian physician who was laureate of the Nobel Prize for Medicine was born in Iasi, on November 19, 1912. After primary school in Iasi he attended B. P. Haşdeu High School in Buzau. Between 1930 and 1936 he was student at the Faculty of Medicine Bucharest, where, in 1932 he was the first at the externat-exam and in 1934 he repeated this performance, being the first at the internat-exam. As a student he became preparatory and , voluntary assistant at the anatomy chair of professor Rainer. In 1940 he obtained his PhD. with the doctoral thesis entitled „The Urinary Tubes of the Dolphin. Comparative Morphologic and Physiologic Study”. After graduating he worked for two years as assistant in the Clinic of Internal Medicine of professor Lupu at the Colentina Hospital, then he came back to the Anatomy Chair of Professor Rainer. He married the daughter of the industrialist Malaxa, thus he could easier

progress in the didactic hierarchy and he could remain in Bucharest, while the other assistants of professor Rainer like I. Th. Riga, Şt. Milcu, I. Ţurai were operated and treated wounded soldiers and military officers at the fronts during the 2nd World War. In 1946 he emigrated to USA with his wife and his parents-in-law. Initially he made postdoctoral research at the Biology Department of the New York University, in the laboratory of Robert Chambers. Albert Claude, one of the pioneers among the savants who investigated the universe of life, convinced him to come to work at the Rockefeller Institute for Medical Research. Here the Romanian savant worked in a laboratory for pathology with James Murphy, G. Hogeboom, Walter Schneider and Keith Porter. The research was mainly on cultures of animal tissues, the initial researches of Palade was in the domain of cell fractionation. In 1949, the researcher-team was reduced because some of them left. Palade and Porter were relocated to the laboratory of Herbert Gasser, two years later, when James Murphy, the laboratory's director retired. Palade became one of the pioneers in the world of electronic microscopy. In 1955 he began a collaboration with the biochemist Philip Siekevityand and with his help he obtained morphological homogeneous cellular components. In fact, since 1952-1953 Palade described the fine structure of mitochondria, then he discovered the ribosomes, which were named „Palade granules”, together with Sandford he studied the fine structure of the chemical synapsis and with Porter, a year later the endoplasmic reticulum (1954). The number of Palade's priorities is great: explanation of the mechanism of protein secretion (on the pancreas of the Guinea pigs), the more detailed description of vascular endothelium etc.



In 1961 he is elected member of the National Academy of Science. In 1973 he moved from Rockefeller Institute to Yale, where he had better research conditions. At the same time he was awarded, together with Albert Claude and Christian de Duve the Nobel Prize for Physiology and medicine „for discoveries concerning the functional organization of the cell that were seminal events in the development of modern cell biology”. Young Romanian physicians had the opportunity to know him personally a few years later, when he came to the International Congress of Science History that was held in Bucharest.

In 1990, after 17 years of productive activity in Yale he settled down in California, where he has been dean for scientific problems at the Faculty on Medicine San Diego.

He has been awarded with numerous titles of Doctor Honoris Causa from famous Universities, he was elected in many Academies around the world. In 1975 he was elected honorary member of the Romanian Academy. A University in Detroit bears his name since 2003.

The gold medal awarded to George Emil Palade as a laureate of the Nobel Prize is now in the treasury of the History Museum of Romania, donated by the heirs. He remains in the history of Romanian medicine as a brilliant example of combination of exceptional intellectual qualities, with passion for work, helped by fortune, which to avoid the others.