

Public Health Institute Niš

Public Health Institute Niš^{1, 2, 3} is the oldest institution in the field of preventive health care in the Balkans.

The Institute performs social-medical, hygienic-epidemiological and microbiological health activities and functions as the teaching base of the Medical Faculty of the University of Niš.

Public Health Institute Niš is the official heritage successor of the Royal Military Zavod* (institution) in Niš, founded in 1900, and in 1923 it became an independent health institution that changed names through the years:

1. Royal Military Pasteur Zavod in Niš - June 7, 1900
2. Epidemiology Zavod in Niš - 1923
3. Hygiene Zavod of the Kingdom of SHS in Niš - 1926
4. Hygiene Zavod of the Kingdom of Yugoslavia in Niš - 1929
5. Hygiene Zavod in Niš - 1941
6. Zavod for Health Care in Niš - June 23, 1961
7. Health Protection Zavod in Niš - 1979
8. Health Protection Zavod Niš - 1984
9. Institute for Health Protection in Niš - 1998
10. Public Health Institute Niš - 2006

* Zavod (Cyrillic: завод) is a word in Slavic languages meaning "institution" in Serbian.

Museum of Health Culture

Public Health Institute Niš incorporates the Museum of Health Culture^{4, 5} founded on June 7, 1985 as the only such state museum institution in Serbia and on the Balkan Peninsula. The founding of the Museum began in 1962 by collecting building materials.

Dr. Vojislav Milojević, a university professor, had the decisive role in the formation of the Museum. He was also the author of the 1985 exposition.

Public Health Institute Niš has been organizing the international Congress of preventive medicine, “Days of Preventive Medicine”⁶ continually for 52 years. During the Congress, the doors of the Museum are open to participants and visitors of the Congress⁷.

Since 2017, the Museum of Health Culture has been included in the program of the “Museum Night “international manifestation”^{8, 9, 10, 11, 12, 13, 14}, and every year it records an increasing number of domestic and foreign visitors^{16, 17, 18}.

The conceptually conceived permanent exposition of the Museum of Health Culture includes several segments:

- 1) documents on the establishment of the Pasteur Zavod;¹⁹
- 2) the presentation of world medicine, from the appearance of man, through the centuries, to the present time;²⁰
- 3) the development of medical thought in the world, Europe, the Balkans, Serbia and Niš;²¹
- 4) material on epidemiological conditions in Serbia and the local region in different historical periods and epochs, with the archive of medical records in Serbia in the past 100 years;^{22, 23, 24}
- 5) exhibits from the 19th and 20th centuries: medical equipment, instruments, mobiliers, photographs and other objects;^{25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35}
- 6) an extensive museum depot;
- 7) books and artistic paintings of the giants and visionaries of medical thought.^{36, 37, 38, 39, 40, 41, 42, 43, 44, 45}

Dawn of the Pasteur Zavod in Niš

Old age

In the ancient times, the city of Niš (Naissus) was inhabited by the Celts, the Dardans, the Illyrians, the Trachans, the Greeks, and finally the Romans, when the city became a major crossroads. In the first century B.C. the region's inhabitants, Dardans and other peoples, had a mixture of traditions- folk medicine, magic and Druidic beliefs. The Romans brought the knowledge of Hippocrates and Galen to these regions.

The Museum shows the heritage of the health culture of that time.

Medieval period

During the Medieval period, medical thought on the territory of the City of Niš and its surroundings was influenced by Roman and Byzantine medicine. Unlike Western Europe, the dogmatic Christian teachings did not hinder the application of positive experiences from the near past, developing monastic medicine on that basis. At that time, the monasteries became the gathering site of the ill and diseased people (Studenica, Hilandar, Dečani...), and the treatment was performed by the “celebnik” healers, the Medieval equivalent of physicians. Because of its strategic position, Niš was a site of war conflicts and consequently a site of plague and other infectious disease epidemics.

This part of the history is also a part of the Museum's exposition.

The arrival of the Ottomans

The four-century rule of the Ottomans in the Balkans was marked with frequent epidemics of plague, bigpox, rabies, typhus, and various parasitoses. The only equivalent of physicians were the hekim (“sages”), and medical sites, islahanas, were the only places to provide some form of health care.

Lady Mary Wortley Montagu⁴⁶, an English aristocrat, writer and wife of the English ambassador in Constantinople, visited the islahana in Niš. The Museum of Health Culture preserves a testimony of her visit. In 1721, she advocated for smallpox inoculation to Britain after her return from Turkey.

At the site of the islahana, the Turks built their military hospital, which was the precursor of the Niš military hospital. Ottoman medicine was mainly intended for the Turks, and later also for the rest of the population. The Ottoman culture left a positive mark on the health of the population by cultivating nutrition and body hygiene, as evidenced by the numerous Turkish baths. The Museum has documents on Christian hekim healers such as Dr. Zaharius Statas from Niš⁴⁷.

Formation of the first Serbian state after liberation

The first half of the 19th century brought about major changes in the field of medicine in the restored Serbian kingdom: Jovan Stejić⁴⁸, the first Serbian physician with university education, as well as Dr. Draga Ljočić⁴⁹, were the first medical professionals in Serbia in the 19th century.

Niš was liberated from the Turks in the second half of the 19th century, and the liberation spurred development of modern medicine in the city and its surroundings. It was a period of early development of military ambulance, military war surgery, the onset of antisepticism, the emergence of nursing and the founding of the Red Cross. The effects of various medical schools (Western, German, and Russian) are also noticeable.

The Museum possesses artifacts that detail the events from this period.

Beginning of the Pasteur Zavod in Niš

The initiator of the establishment of the Pasteur Zavod in Niš was the King of Serbia, Milan Obrenovic. His high education, involvement in high European society, knowledge of the importance of the works of the famous French chemist and microbiologist Louis Pasteur, as well as knowledge of the state of the Serbian medical care at the time were decisive in his initiative to establish the Pasteur Zavod. In 1886, King Milan Obrenović awarded the Order of St. Sava decoration of merits to Louis Pasteur⁵⁰, an act by which he confirmed the importance of preventive medicine, and thus became the first ruler in Europe to award a decoration of merits to this great scientist.

After the Serbian-Turkish wars of 1878, and the unfavorable health conditions in the Serbian army, the Army of the Kingdom of Serbia was the first to introduce a systematic immunization against smallpox. Immunization for the military and citizenship was initially carried out using human lymph based, and then animal lymph based vaccines. A large number of rabies-related deaths, especially in children, prompted the need to establish institutions for the prevention of rabies in the Kingdom of Serbia.

There are numerous assumptions about the reason the Pasteur Zavod was established in the recently liberated Niš, instead of the Serbian capital of Belgrade. One of the possible theories is the representatives of the city of Belgrade fearing the spread of infection, but it was certainly the love of the King towards Niš, the summer capital, that was crucial in the choice. The King directed the famous Serbian neurologist and writer Dr. Laza Lazarević⁵¹ to professional training in the field of preventive medicine in Vienna, in order to take over the organization of the founding of the Pasteur Zavod. Unfortunately, Dr. Lazarević did not succeed because he got sick and died of tuberculosis at the age of 40.

In 1898, Milan Obrenović ordered the Medical Corps colonel Dr. Mihajlo Mika Marković⁵², the head of the Sanitary Department of the Ministry of Army, to establish the Pasteur Zavod in Niš, modeled on similar institutions in Europe. Ten years before the start of this initiative, Dr. Mihajlo Mika Marković had sent the Medical Corps captain Dr. Dimitrije Gerasimović to professional training at the Dr. Heinrich Institute in Vienna, in order to introduce processing of the animal lymph to Serbia. In 1886 he personally banned the inoculation of soldiers using human lymph. After that, he started planning the creation of the Bacteriological and Hygienic Zavod, which he suggested to be organized by Dr. Dragutin Petković⁵³. Soon after that, in 1899, conditions for the establishment of the Pasteur Zavod in Niš were met.

Niš municipality provided the location for the construction of the future Pasteur Zavod on a field of empty land about 3 km from the city center. In August of the same year, the construction of Pasteur Zavod began according to the project of Dr. Mihajlo Mika Marković.

Royal Military Pasteur Zavod in Niš

The Royal Pasteur Zavod in Niš (1900-1923) is the first institution in the Balkans for the production of animal lymph and the first preventive medical institution in Niš and Serbia, founded in 1900- 15 years after Paris, 14 years after Moscow and Petrograd, 10 years after New York and Chicago. The Kingdom of Serbia is the fifth country in the world to found a Pasteur Institute, on June 7, 1900 in Niš⁵⁴. This extraordinary act meant the Kingdom of Serbia founded an institution on the level of contemporary worldwide preventive medicine institutions.

In the spring of 1900, the construction of the building was finished and at the opening Dr. Mika Markovic said: "With these achievements, our homeland's gains will not be only material, but also moral. The entire Europe, even our biggest enemies, whether they want it or not, will have to admit that Serbia does not lag behind the civilized West when, in addition to such scientific societies, we have our Pasteur Zavod and the Bacteriological and hygienic institute."

On the day of its opening ceremony, June 7, 1900, the Pasteur Zavod in Niš began with the production of the animal lymph vaccine against smallpox. Dr. Mihajlo Marković himself inoculated the first vaccination calf in front of his colleagues⁵⁵.

On December 25, 1900, the Ministry of Army of the Kingdom of Serbia issued an order proclaiming the newly-established Zavod in Niš as the Royal Military Pasteur Zavod with the task of "producing an anti-rabies emulsion for preventive inoculation against rabies, with a department for production of animal lymph".

The first director of the Pasteur Zavod was Dragutin Petković.

At the end of 1900, the first civilian patients, bitten by a rabid wolf, were sent to the Pasteur Zavod for treatment⁵⁶. Since its inception, the anti-rabies department treated up to 300 patients annually.

According to statistics from 1901-1904, over 1000 people were treated, of which 7 died.

In 1904, the bacteriological department was formed. The Zavod expanded its work to various microscopic examinations, testing drinking water quality and other medical analyses.

Royal Military Pasteur Zavod in Niš during the First World War

Having just been through the Balkan liberation wars, The Kingdom of Serbia was inadequately prepared for the beginning of the First World War in 1914, while Niš and its Zavod worked at full capacity. As early as 1915, Serbia faces a terrible typhus epidemic. This epidemic, which emerged after the great victories of the Serbian army in the second half of 1914, brought great suffering to the military and civilian population. Over 250000 people had succumbed to the typhus epidemic, centered on the city of Valjevo and central Serbia. The health service in Serbia, despite all efforts, could not manage to deal with the epidemic. Many humanitarian and health workers from Russia, France, Britain, and Scotland have attempted to lessen the effects of this calamity. In January 1915, Dr. Elizabeth Ross⁵⁷, a Scottish doctor, came to Serbia. Her first work tasks were accomplished at the Pasteur Zavod. Towards the end of January, she leaves for the First Reserve Military Hospital in Kragujevac to treat the ill. The British medical military mission strongly resented her personal engagement and self-sacrifice, but she did not attach much importance to it- "Well, somebody has to do that, too", her words still ring true today. Elizabeth Ross⁵⁸ died on February 14, 1915, on her 37th birthday, from the consequences of typhoid. At that time, the great Serbian painter Nadežda Petrović succumbed to the same disease⁵⁹.

Health workers, together with the Serbian army and people, withdrew from the incoming Austro-Hungarian troops. During this period, Bulgarian occupiers seized the complete laboratory of Pasteur Zavod in Niš.

Dr. Ludwik Hirszfeld^{60, 61}, a prominent Polish microbiologist and serologist, and a pioneer in vaccination campaigns against typhus, applied for duty in Serbia and withdrew together with Serb soldiers through Albania.

Royal Military Pasteur Zavod in Niš from 1918 to 1923

As Serbia, devastated by war and destruction, slowly recovered, so did the Pasteur Zavod in Niš. The building did not suffer damage, but it was necessary to restore the looted inventory and renew the laboratory. A new state was formed, the Kingdom of Serbs, Croats and Slovenes, with King Alexander Karađorđević, who by the order from 1923 bestowed upon the former Royal Military Pasteur Institute the status of the Epidemiology Zavod^{62, 63}.

Epidemiology Zavod, Hygiene Zavod and Public Health Institute Niš

First director of the Epidemiology Zavod, Georgios Alivizatos⁶⁴, separated the work of the Zavod from the work of the Military Hospital. The testimony of this period is a book of impressions with the signatures of King Alexander and Queen Marija Karađorđević⁶⁵.

In 1926, the Epidemiology Zavod expanded to become the Hygiene Institute, and in June 23, 1961, in post-war Yugoslavia, it became the Zavod for Health Care in Niš and the teaching base of the Medical Faculty of the University of Niš.

Since 2006, this institution has been given a new name – Public Health Institute Niš.

Architectural characteristics of the Pasteur Zavod building

The building of the Pasteur Zavod in Niš was constructed in 1900 and it was the first and only health institution in the field of preventive medicine in Serbia at that time, until the end of the First World War. Construction began during the summer of 1899 on the land provided by the Niš municipality, and construction works were completed in April 1900. The architectural project of the building was designed in the Engineering and Technical Department of the Military Ministry according to the draft sketch of Dr. Mihajlo Milojević.

The building was constructed as a ground-level structure in the style of academism and neo-Renaissance, as were the other public buildings of that time. It was built on the perimeter of the city because of the "dangerous activities" that were carried out in it. Soon there were other medical institutions erected around it, which makes it a nucleus of the future development of the entire city healthcare complex.

The building has been constructed using solid materials, with solid brick walls and lime mortar. Foundations and basement walls were built using stone. The floor structure between the basement and the ground floor was constructed as a shallow barrel vault of bricks and steel carriers. The ceiling was made of wooden beams with plaster applied over reed base surface. The roof structure was made using coniferous timber, covered with the beaver tiles. All interior walls and ceiling surfaces are plastered.

Façade surfaces were treated with rich plaster and stucco decoration. Particularly decorative work was done on the street and side façades with accentuated wall skirting, horizontal decorative molding at the level of the attic floor structure and the distinctively monumental top cornice. Dynamics on the façade is achieved with four tympana, two of them shallow, on the older part of the building, and two deeper tympana that were built in the 1923-1926 extension. Shallow decorative angular pilasters that support pillars with bases and capitals, lintel semi-circular friezes, geometric plaster decoration and gypsum attic cornice, rank this building among the most exceptional achievements of Niš architecture of the time.

The main façade of the building is oriented towards Dr. Zoran Đinđić Boulevard. It is a freestanding structure in the form of a Cyrillic letter P (П). The originally built central part of the building dates back to 1900, while two symmetrical side wings were added to it in the 1923 to 1926 period. The present appearance of the building was shaped between 1979 and 1981. The total length of the building is 45.35 m and, even with the extension, the main façade retained a fair horizontal silhouette facing the Boulevard.

In front of the building entrance is a park surface with busts of Louis Pasteur and Mihajlo Mika Marković, which gives an additional monumentality to the the Pasteur Zavod building entrance.

Due to its architectural features, as well as the original and unique function it performed in the Kingdom of Serbia, the Pasteur Zavod building was registered as cultural monument in October 1963 by the Republic Institute for the Protection of Cultural Monuments of Belgrade, and by the decision of the Institute for the Protection of Cultural Monuments of Niš in 1975. As early as 1979, the Assembly of the Republic of Serbia categorized the building as cultural heritage of great significance.

After the last reconstruction in 1981, the Museum of Health Culture with a permanent exhibition was located in the oldest part of the Pasteur Zavod. At present day, the building also houses the Center for Health Promotion of the Public Health Institute Niš, and the offices of Serbian Medical Society.

During the establishment of the Museum in 1981, just an exhibition space was planned, which, in the spirit of contemporary museum activities, would require the construction of a reception foyer, cloakroom, sanitary facilities, a depot and a souvenir shop- for which the Museum possesses basement rooms in excellent condition.

In recent years the Museum has been actively involved in the international manifestation “Night of Museums”, with thematic exhibitions and a large number of visitors.

The museum is actively used during the year for education of students of all study groups of the Medical Faculty of the University of Niš on topics in the field of medical history.

Attachments

1. Public Health Institute Niš - view from the east



2. Public Health Institute Niš - entrance



3. Public Health Institute Niš - view from the west side



4. Pasteur Zavod - 115 years of the Institute



5. Museum of Health Culture

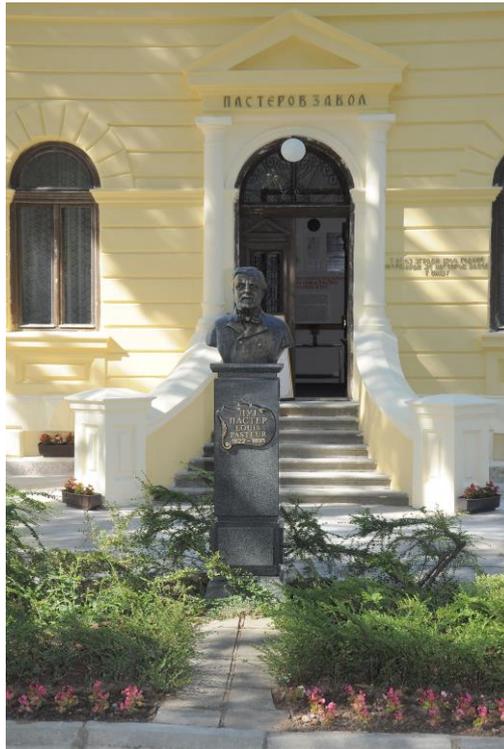


6. 52 Days of Preventive Medicine



52 Days of
Preventive
Medicine

7. Entrance to the Pasteur Zavod



8. Official "Museum Night" portal



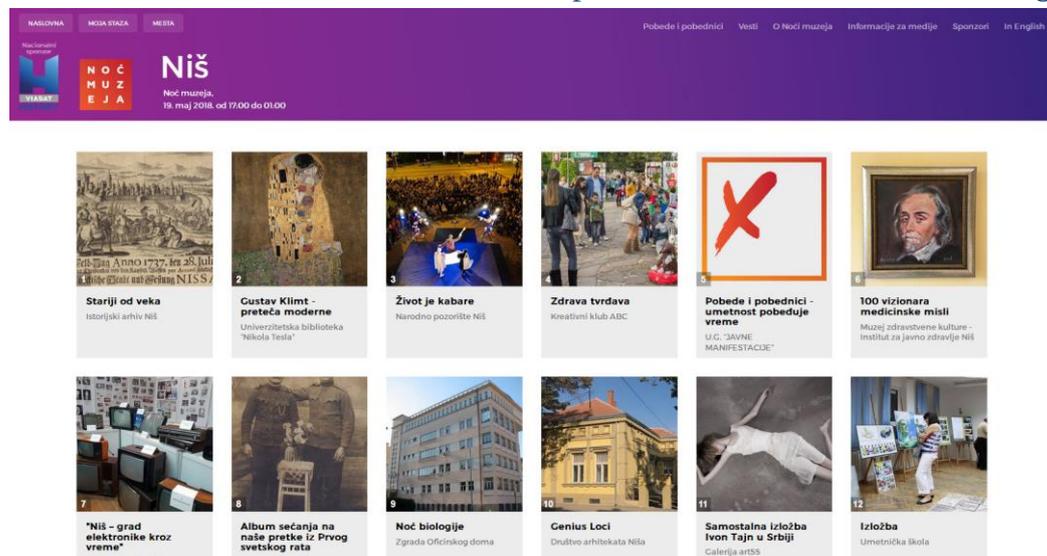
9. Museum of Health Culture - Official presentation of the Museum



Muzej zdravstvene kulture - Institut za javno zdravlje Niš



10. Museum of Health Culture - Official exposition number 6 - "Museum Night"



11. Exhibition "Museum Night" 2018



12. Exhibition "Museum Night" 2018 - history of microbiology



13. Exhibition "Museum Night" 2018 - the beginning of medicine



14. Exhibition "Museum Night" 2018 - view of the building from the outside



15. Museum of Health Culture, Central Section - Days of Preventive Medicine



16. Museum of Health Culture, Eastern Section - Days of Preventive Medicine



17. Museum of Health Culture, Central Section - founders, Days of Preventive Medicine



18. Museum of Health Culture



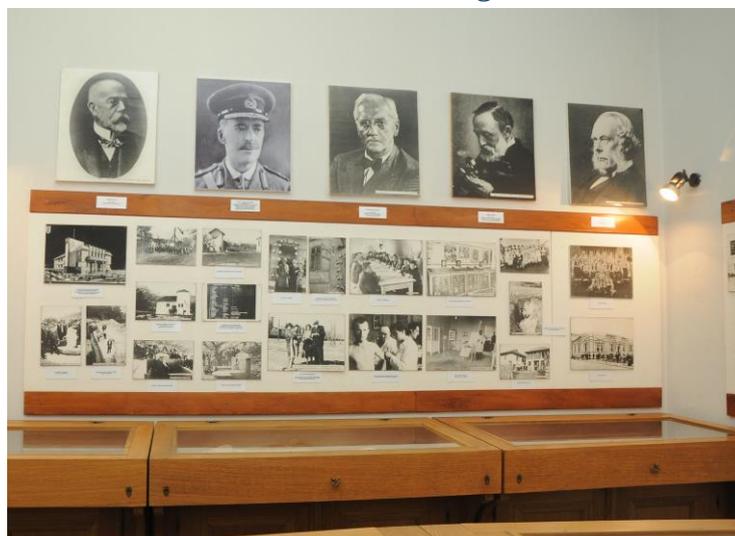
19. Museum of health culture - photos



20. The Museum of Health Culture - the emergence of medicine



21. Museum of Health Culture - giants of medicine



22. Museum of Health Culture



23. Museum of Health Culture



24. Museum of Health Culture



25. The Museum of Health Culture - static disinfection bellows



26. Museum of Health Culture - poster



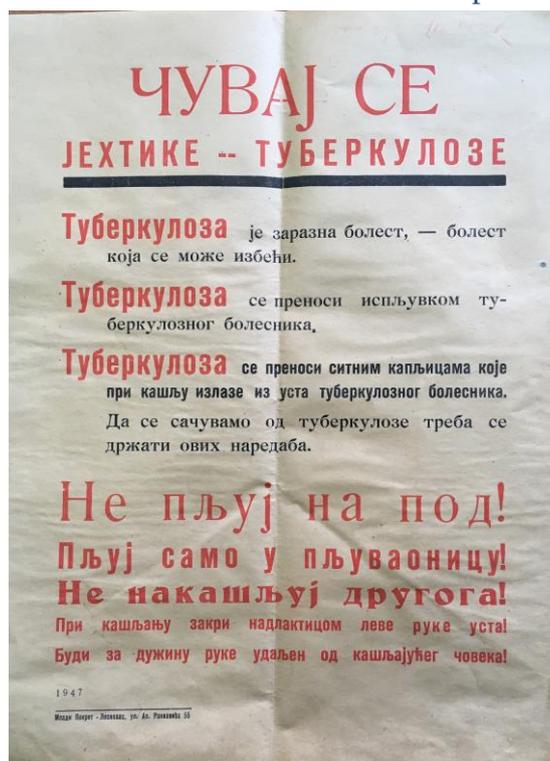
27. Museum of Health Culture



31. The Museum of Health Culture, static disinfection bellows, mobile disinfection device



32. Museum of Health Culture - poster



33. Museum of Health Culture - poster



34. Health Culture Museum - old device for measuring lung capacity



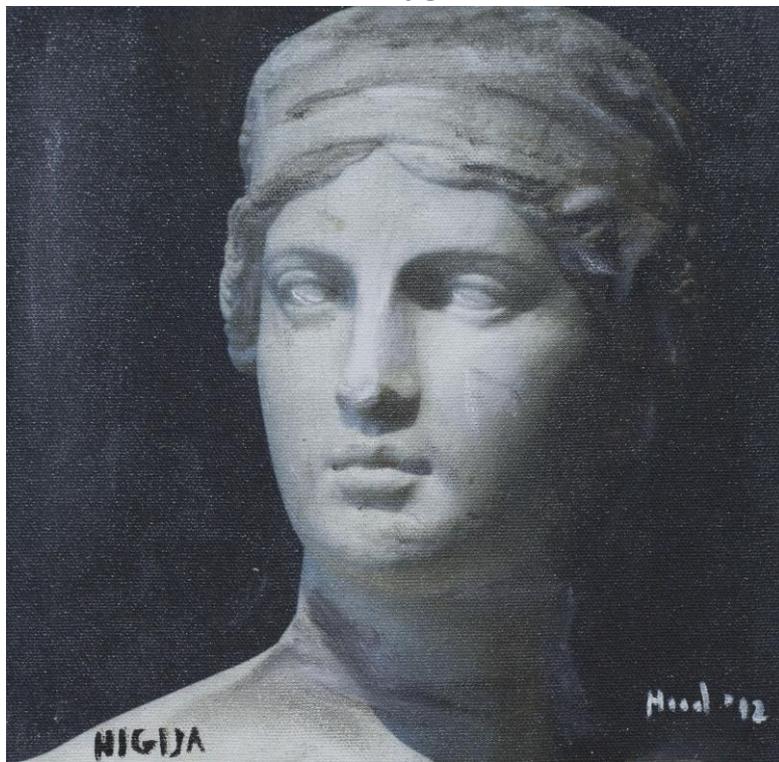
35. Museum of Health Culture



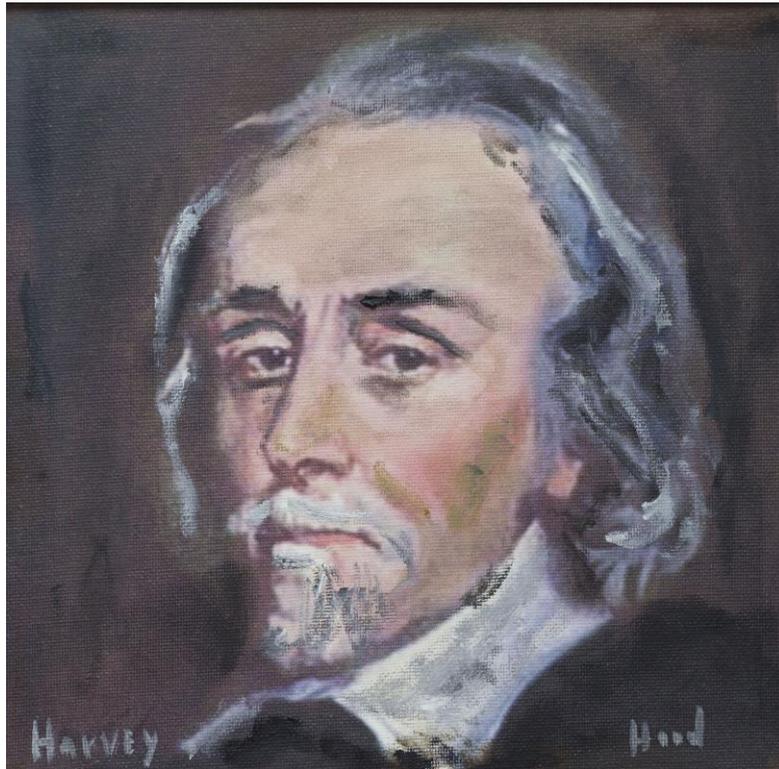
36. Hippocrates - father of medicine



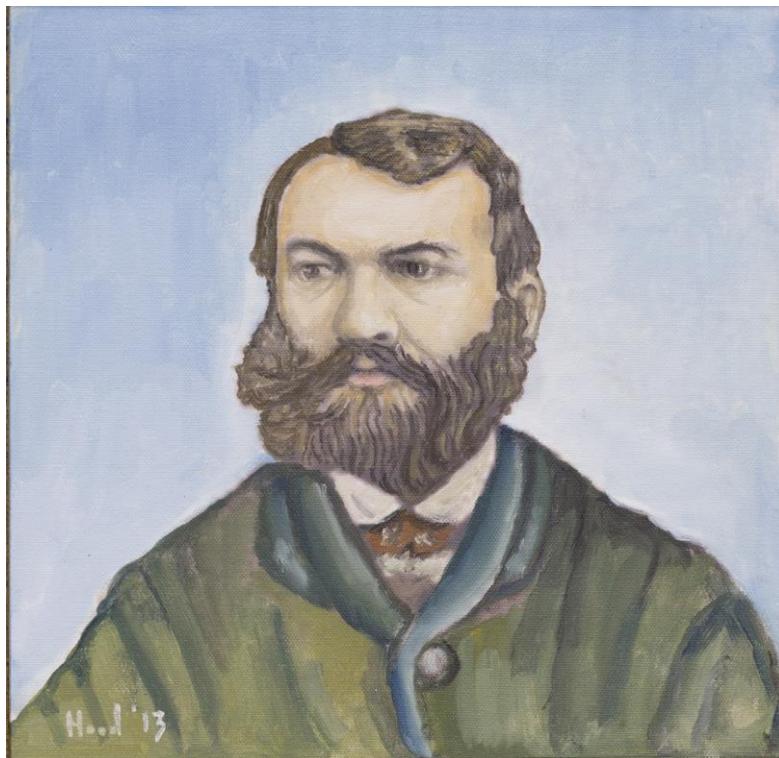
37. Hygia



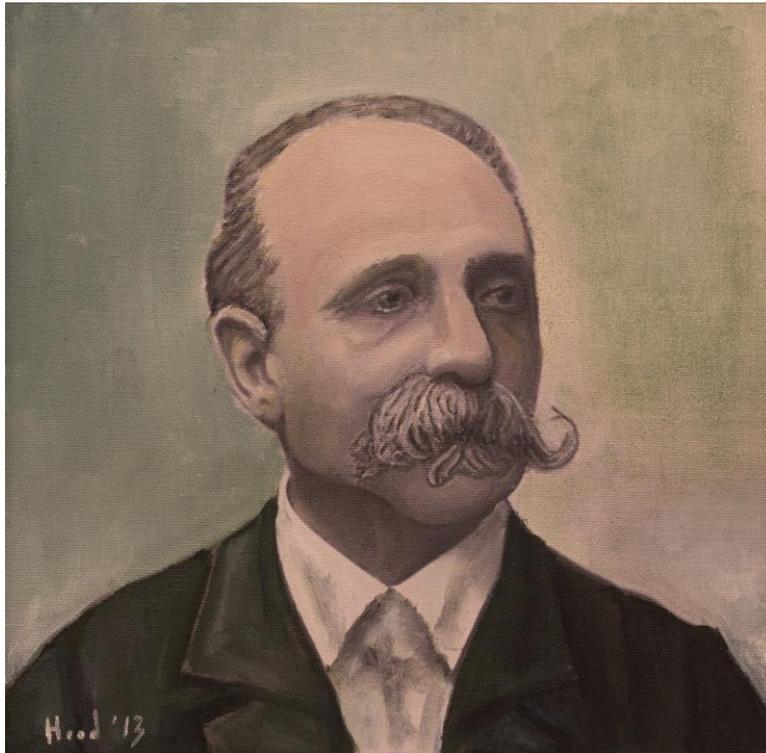
38. William Harvey



39. James Parkinson



40. Camillo Golgi



41. Hans Christian Joachim Gram



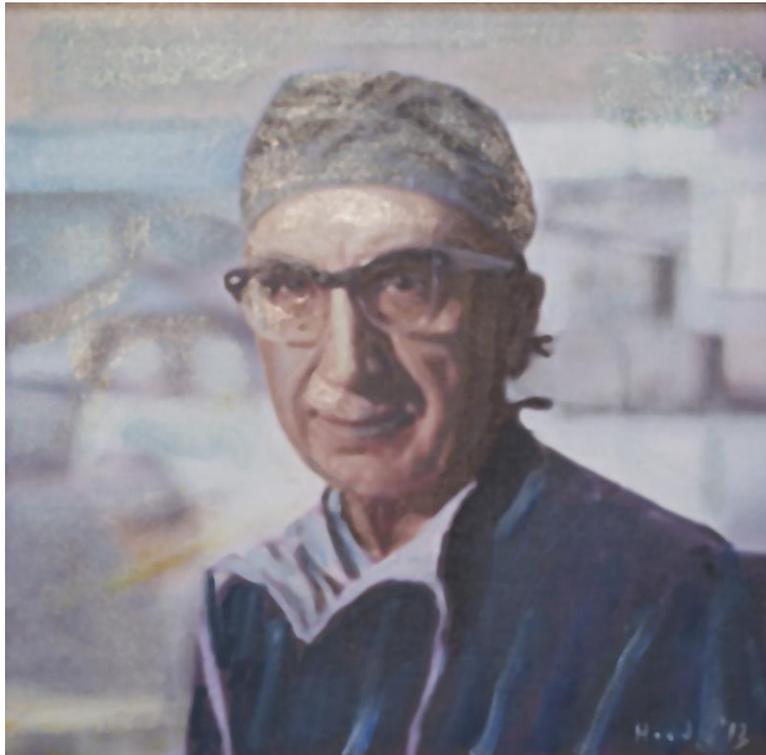
42. Stanislaus von Prowazek



43. Georgios Papanikolaou



44. Michael DeBakey



45. Arthur James Guyton



46. Mary Wortley Montagu



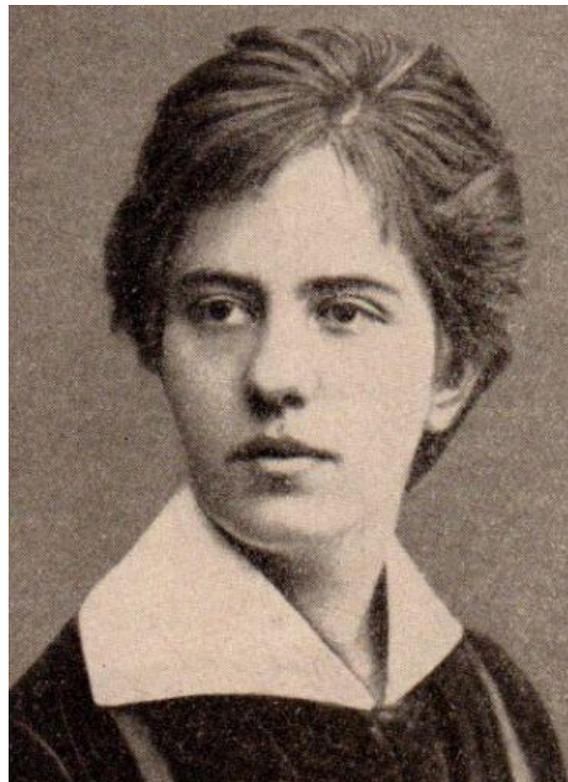
47. Dr Zachary Statas



48. Dr. Jovan Stejić



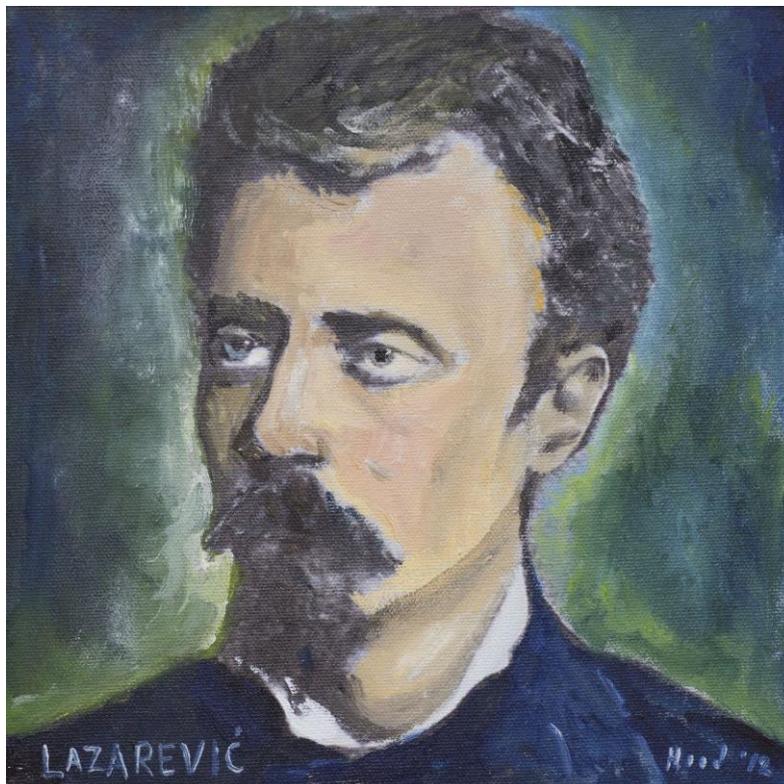
49. Dr. Draga Ljočić



50. Order of St. Sava



51. Dr Laza Lazarević



52. Dr Mihajlo Mika Marković



53. Dr Dragutin Petković



54. Royal Military Pasteur Zavod in Niš



55. Dr Dragutin Petković and colleagues



56. The first patients from the vicinity of Čačak



57. Dr Elizabeth MacBean Ross



58. The British Medical Journal on the work of Dr. Elizabeth Ross

MARCH 13, 1915] OBITUARY. [THE BRITISH MEDICAL JOURNAL 491

here, really valuable experiments could be carried out, and the question definitely pronounced upon in a very short time.

To be of real value, such a committee must not be composed entirely of total abstainers.

I am quite unable to endorse Sir Victor Horsley's sweeping assertion (p. 448) that "a man whose cerebration is habitually influenced by taking alcohol is, in direct proportion to its dose, so much the less the possessor of an open mind," etc., my experience being that up to a point such a man is perfectly capable of forming an unbiassed opinion.

Personally, I have taken during a fairly long period of my life a strictly moderate allowance of alcohol; during another long period I have taken no alcohol at all. I have been quite unable to see that my opinions with regard to alcohol differed during either of these periods.

Moreover, it has been my experience that one finds it more difficult to get an unbiassed, reasoned, logical opinion on alcoholic custom from the total abstainer—I am not speaking of individuals—than from one who takes his alcohol in the strictest moderation.—I am, etc.,
Ghyllwoods, nr. Cocker-mouth, J. W. ASTLEY COOPER,
March 9th.

THE COFFEE RATION.

SIR.—Dr. Dutton's views relating to the ill effects of coffee as a beverage are easy to understand when we remember that coffee can be synthetically prepared from urine, and must therefore easily break up to produce those substances which act as toxins in the system. I have known several cases in which coffee taken once a day for a week has invariably resulted in unsightly pimples and skin blotches, and there are people who suffer in the same way after eating kidneys.

One case of susceptibility to the injurious influence of coffee was also remarkable from the fact that bananas would produce similar effects. The patient could never eat two bananas at the same meal without having a small boil appear somewhere on the body within a few days; and this boil would be peculiar in its persistency—that is, it would keep refilling after discharging, and could not be cured until a minute pyogenic membrane was extracted. If, however, one banana only was eaten no trouble

capacity for getting on with every one with whom he came in contact. During the time he was house-physician I formed a very high opinion of him, and it was a great pleasure to work with him.

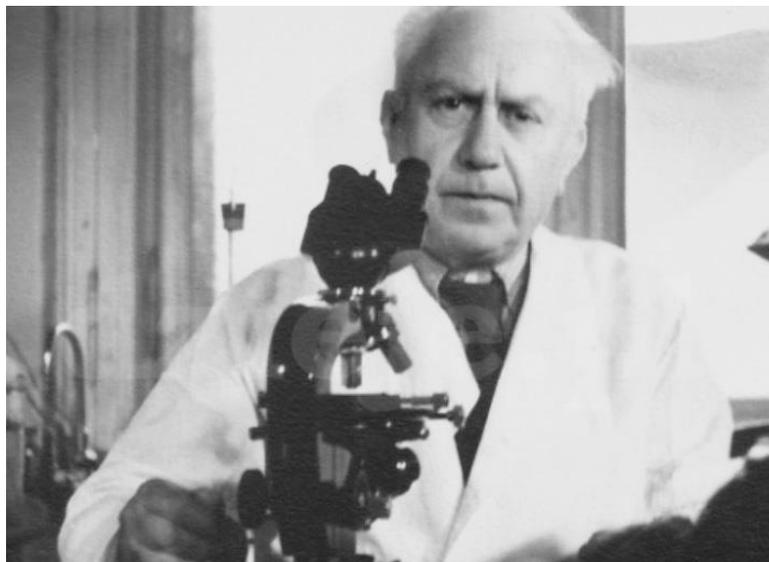
One of his colleagues on the resident staff says: "He was beloved by everyone with whom he came in contact. One felt instinctively that here was a chum in whom one could confide the most treasured secret. After eighteen months' close friendship, I have no words with which to describe my feelings towards him. His death has left a blank which can never be filled. There are many sore and aching hearts here."

THE DEATH AT KRAGUEVATZ, SERBIA, ON FEBRUARY 14TH, OF DR. ELIZABETH NESS MACBEAN ROSS, daughter of the late Mr. MacBean Ross, manager of the London branch of the Commercial Bank of Scotland, has just been announced. In 1901 Dr. Ross took the degrees of M.B. and Ch.B. Glasg. and in 1914 the diploma of Tropical Medicine. She was medical officer at Colonsay for some months, and practised for a year and a half in East Ham; she then went to Persia, holding appointments in Ispahan, Shiraz, and the land of the Bakhtiari, a semi-civilized tribe inhabiting the mountains and upland valleys between Ispahan and Khuramahad. Dr. Ross wrote a history of the tribe. Her health failing, she went to Japan as surgeon in a Glasgow Line boat, and returned to Ispahan in April, 1914. In January she went back to Europe and proceeded to Servia where she worked first at Nish and then at Kragujevatz. At the latter place she volunteered to take charge of the typhus wards; after a week of heavy work she contracted the disease, and died after an illness of thirteen days. The esteem which she and her colleagues of the Scottish unit have won was shown by the remarkable demonstration made at her funeral, which was attended by many Servian nurses and officers. The native clergy took part in the funeral procession, which was headed by the band of the Guards of the Crown Prince of Servia; a service was read at the graveside by Colonel Harrison, the British military attaché. Dr. Ross leaves a widowed mother, two brothers, and five sisters; one brother and one sister are members of the medical profession.

59. Nadežda Petrović



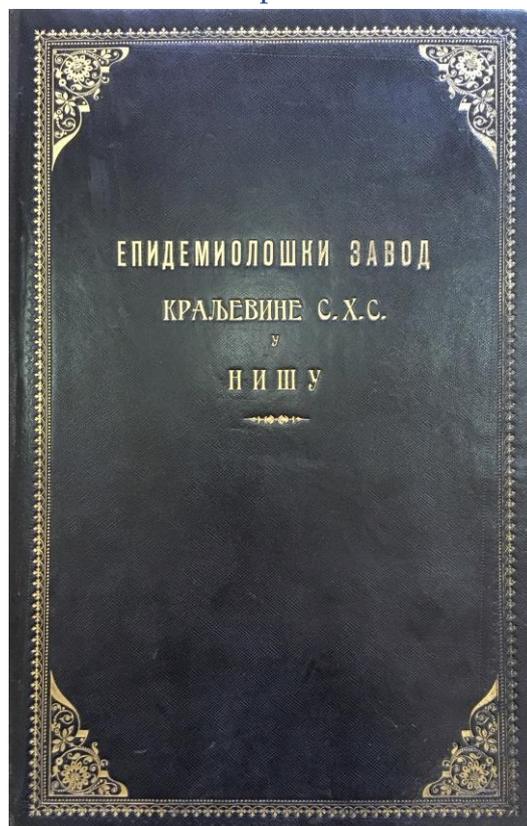
60. Ludwig Hirschfeld



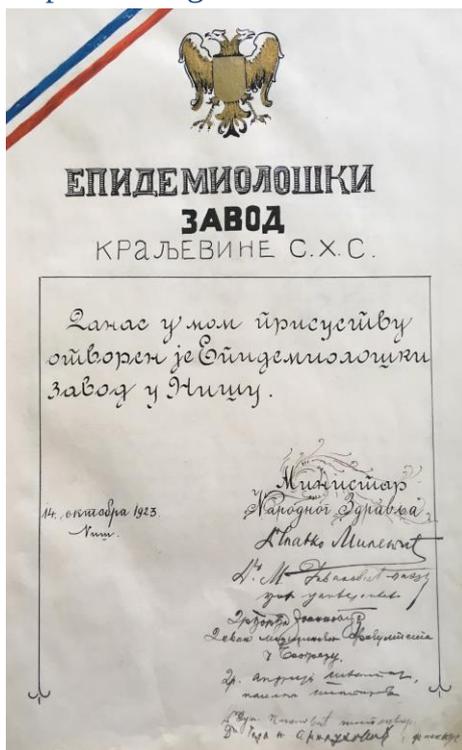
61. Ludwig Hirschfeld - bust in the Museum



62. Book of impressions - cover



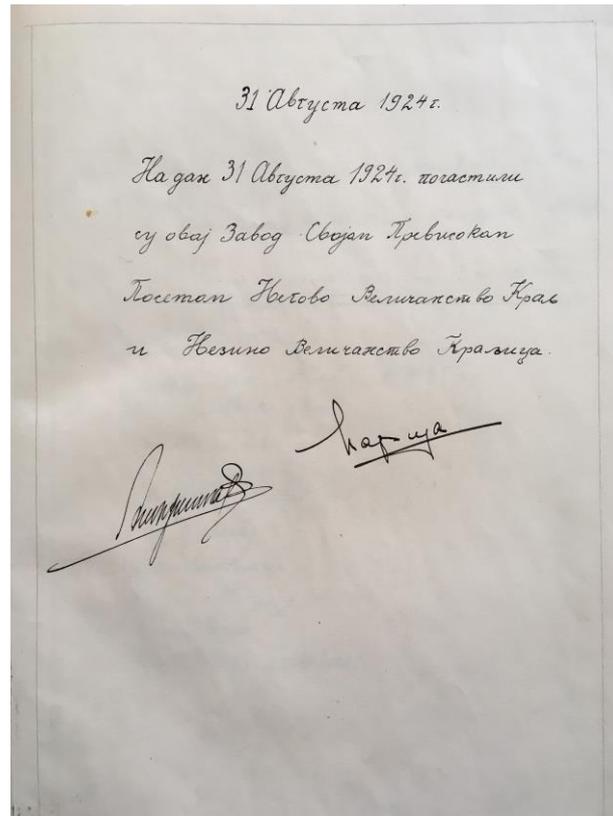
63. Epidemiological Zavod - founders



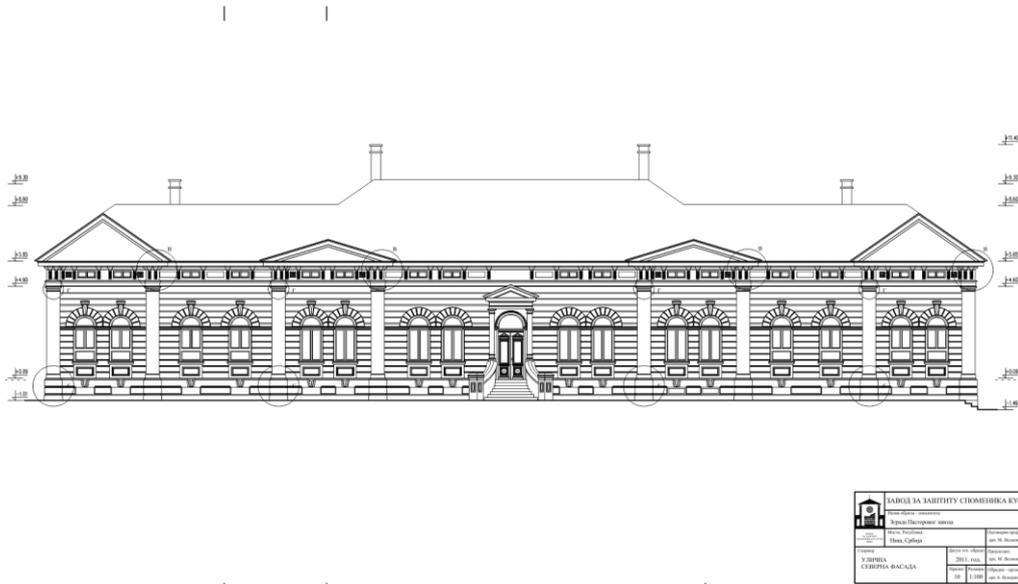
64. Dr. Georgios Alivizatos



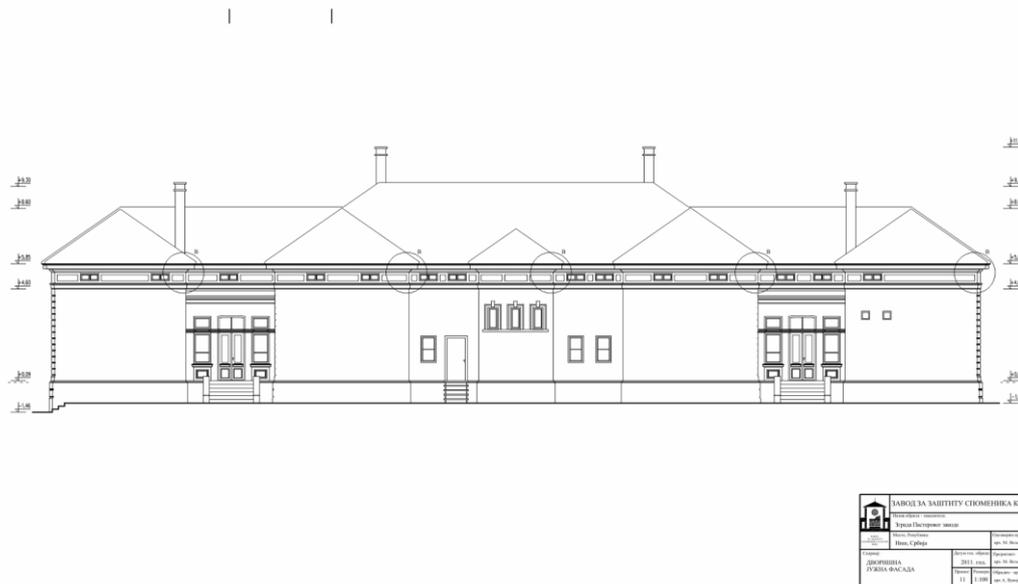
65. Signatures of King Alexander Karađorđević and Queen Maria Karađorđević



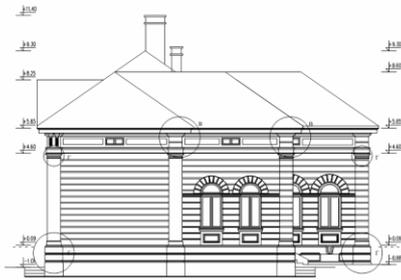
66. Architectural drawing – North façade of the Pasteur Zavod building



67. Architectural drawing – South façade of the Pasteur Zavod building



68. Architectural drawing – Pasteur Zavod building west and east façades



ЗАВОД ЗА ЗАШТИТУ СПОМЕНИКА КУЛТУРЕ НИШ			
Универзитет "Никола Тесла"			
Врхунска Пасторовна зграда			
Ниш, Србија			
Страна	Година изградње	Датум изградње	Датум пројекта
SRB	1911	1911	1911
SRB	1911	1911	1911
SRB	1911	1911	1911



ЗАВОД ЗА ЗАШТИТУ СПОМЕНИКА КУЛТУРЕ НИШ			
Универзитет "Никола Тесла"			
Врхунска Пасторовна зграда			
Ниш, Србија			
Страна	Година изградње	Датум изградње	Датум пројекта
SRB	1911	1911	1911
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SRB	1911	1911	1911