KHARKIV NATIONAL MEDICAL UNIVERSITY



HISTORY OF MEDICINE

Methodical developments

for teachers to conduct a practical lesson

on the topic ***“Medical Scholars of Ukraine”***

for the preparation of students in specialties:

* 222 “General Medicine”,
* 221 “Dentistry”.

Kharkiv

2018

MINISTRY OF PUBLIC HEALTH OF UKRAINE

KHARKIV NATIONAL MEDICAL UNIVERSITY

DEPARTMENT OF PUBLIC HEALTH AND HEALTHCARE MANAGEMENT

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**GUIDELINES FOR TOPIC TRAINING**

**The aim of the class:** presentation of short data about lives and activities of outstanding Ukrainian medical scholars

**To know:**

* ***Curriculum questions:***
* life and activity of Martyn Matviyovych Terekhovsky;
* life and activity of Nestor Maksymovych Ambodic-Maksymovych;
* life and activity of Danylo Samiylovych Samoilovych (Sushkovsky);
* life and activity of Olexander Mykhailovych Shumlyansky;
* life and activity of Illya Vasylyovych Buiallsky;
* life and activity of Stepan Khomych Khotovytsky;
* life and activity of Fedir Ivanovych Inozemtsev;
* life and activity of Olexii Matviyovych Philomafitsky;
* life and activity of Mykola Ivanovych Pyrohov (Pirogov);
* life and activity of Illya Illich Mechnikov;
* life and activity of Vasyl’ Parmenovych Obraztsov;
* life and activity of Volodymyr Kostyantynovych Vysokovych;
* life and activity of Mykola Fedorovych Gamaliya;
* life and activity of Danylo Kyrylovych Zabolotny;
* life and activity of Volodymyr Petrovych Filatov;
* life and activity of Mykola Dmytrovych Strazhesko;
* life and activity of Olexander Oleksandrovych Bohomolets’
* life and activity of Mykola Mykhailovych Amosov.

**Be able to:**

* give the conclusion about the main ideas of a certain medical scholar;
* define famous scholars according to the belonging to the appropriate medical schools.

**The form of the class:** seminar.

**The place of class**: a classroom of the department

**Methodical equipment of class:**

* methodical guidelines to classes;
* presentation materials;
* tests;
* summary of lectures.

**The algorithm of the class:** After the checking of attendance, teacher announces the theme and the aim of the class, explains its topicality and the variants of using of this information in practical activity.

After the introduction teacher has to ask about the difficulties during the preparing of the topic. The next step is discussing and control of students’ knowledge in frames of the main theoretical material, paying the attention on the difficult questions.

*Applied forms of control:* oral quiz of students; theoretical or problem discussion; short control papers according to variants – time of writing about 5–7 minutes; tasks of terminology defining; written control of theoretical knowledge – individual tasks or variant tasks, with 3–4 theoretical questions (time for the fulfilling about 20 minutes); writing the test tasks with the compulsory analysis of answers.

After the control of theoretical knowledge, teacher makes the conclusions, summarized the results of the control of theoretical knowledge of students and gives forth the marks, which students got during the class.

By the end of the class teacher explains the main points of the homework.

**Class schedule and timing in percent to the duration of class:**

|  |  |  |
| --- | --- | --- |
| 1 | Introduction to class | up to 5 % |
| 2 | Control of initiative knowledge | 5–10% |
| 3 | Consideration of the key questions to the topic | 75–80% |
| 4 | Summing-up and the announcement of home task | up to 10% |
|  | **Sum in total** | 100% |

**References**

**Basic Literature**

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2. Верхратський С. А. Історія медицини / С. А. Верхратський, П. Ю. Заблудовський. – К. : Вища школа, 1991. – 432 с.

3. Treasury of Kharkiv Medicine. Personalities. Reference book / Under the general editorship of Prof. V.M. Lesovoy. – Kharkiv : KhNMU, 2015. – 128 p.

**Auxiliary Literature**

1. Заблудовский П. Е.  История отечественной медицины / П. Е. Заблудовский. В 2 ч. – М. : Б.и., 1960. – 171 с.

2. Сорокина Т. С. Атлас истории медицины. Новое время / Т. С. Сорокина. – М. : Медицина, 1987. – 164с.

3. Хрестоматия по истории медицины / сост. Э. Д. Грибанов – М. : Медицина, 1968. – 359 с.

4. Чикин С. Я. Врачи философы / С. Я. Чикин. – М. : Медицина, 1990. – 384 с.

**Internet Resources**

1. National Library of Ukraine Vernadsky <http://www.nbuv.gov.ua>
2. National Scientific Medical Library of Ukraine <http://www.library.gov.ua>
3. Scientific Library of Kharkiv National Medical University <http://libr.knmu.edu.ua/>
4. U.S. National Library of Medicine <http://www.nlm.nih.gov/>

**MAIN THEORETICAL MATERIAL FOR CLASS TRAINING**

**1. Martyn Matviyovych Terekhovsky (1740–1796)**

*Martyn Matviyovych Terekhovsky*was an outstanding biologist and physician. He was born in 1740, in the village Velyka Pavlivka in Zin’kiv district, Poltava region (according to the other data, he was born in Hadyach, the town in Poltava region) in the family of clergyman.

He graduated Kyiv-Mohyla Academy in 1763, and in two years (1765) – Medical-Surgery School of General Hospital in St. Petersburg. When he was 29-year-old, he got the position of physician at Petersburg Hospital. From 1770 up to 1775, he was a student of Strasbourg University. In 1775, M.M. Terekhovsky defended doctor dissertation in Biology (“De Chao Infusorio Linnaei”). He started to teach general pathology, pharmacology, and directed by the students’ practice at Kronshtadt Medical-Surgery School in 1777. At the same time he was working as a junior doctor in Kronshtadt Naval Hospital.

In 1780, M.M. Terekhovsky started to teach the Anatomy course at Medical-Surgery School in St. Petersbourg, and in 1783 he was elected as a Professor. At that time in the high authority circles the decision of reorganization of medical education was adopted. In March, 1785 the special commission was sent abroad to get the experience in organization of West-European medical education. In the stuff of commission there were Ukrainian medical scholars M.M. Terekhovsky and O.M. Shumlyansky. Both of them after the visiting of West Europe they worked out own projects of medical education reformation. In 1792, M.M. Terekhovsky was elected as an Honour Member of the State Medical Collegium, where he reviewed the scientific works.

**2. Nestor Maksymovych Ambodic-Maksymovych (1744–1812)**

*Nestor Maksymovych-Ambodic*was the outstanding scholar of the second half of 18th century. He was born in Vepryk village, Poltava region in November, 7, 1744. Studied in Kyiv Mohyla Academy, after that trained at St.Petersburg Hospital School. In 1773 in Strasbourg he had got Doctor Degree in Medicine. In 1782 he became the first Professor of Obstetrics in Russian empire. In 1797 he initiated the foundation of Clinical Midwifery Institute in St. Petersburg.

He is considered the founder of medical terminology here. His fundamental works in obstetrics, pediatrics, and medical botany were the first original scientific text-books which encouraged the development of medical education and obstetrical training in Russian empire. Dictionaries, compiled by N. Ambodic-Maksymovych gave the chance to work out medical nomenclature in Russian empire.

Nestor Ambodic-Maksymovych translated a big number of scientific works of foreign authors that helped to popularize medical knowledge among the population.

**3. Danylo Samiylovych Samoilovych (Sushkovsky) (1744–1805)**

*Danylo Samiylovych Samoilovych (Sushkovsky)* was Ukrainian physician, the founder of epidemiology in Russian empire and the first Ukrainian Medical Society. He was born in Yanivka village, Chernihiv region (Ukraine) in the family of clergyman. He studied in Chernigiv collegium, Kyiv Mohyla Academy, and St. Petersburg Hospital School. In 1767 he became a doctor and headed the first Russian Female Venereological Clinic. He was a military doctor during Russian-Turkish war (1768–1774).

In 1780, at Leiden University defended dissertation “Tractatus de sectione symphyseous ossium pulis et…sectionem Caesareum” for Doctor degree.

His scientific investigations were devoted to the plague. Thanks to the rich practical experience Danylo Samoilovych made a lot of discoveries. He was the first Ukrainian author, who described in details the clinical course of the plague, he was sure that the hypothesis of the living nature of the plague pathogen and its contagious influence on the population during epidemics, and developed the strict system of anti-epidemic measures. Because of that D. Samoilovych is considered the founder of epidemiology in here, in these lands. D. Samoilovych was one of the pioneers-“hunters” on the plague pathogen, thanks to what he became famous. Only the imperfection of the microscopes at that time did not give him the chance to detect a plague pathogen. The idea of the formation of artificial immunity against the plague by vaccination was the scientific merit of Danylo Samoilovych.

**4. Olexander Mykhailovych Shumlyansky (1748–1796)**

*Olexander Mykhailovych Shumlyansky* was obstetrician, Doctor in Medicine, and surgeon. He originated from Poltava region, got the education at Kyiv Mohyla Academy and St. Petersburg Hospital School. In 1793 he defended dissertation devoted to the kidney structure in University of Strasburg. He was the first scholar, who described the Malpighian body, and discovered that it was not the gland, like the majority of scientists considered, but the glomerular vasculature (O.M.Shumlyansky offered the name «glomerulus»). He underlined that “glomerulus” has the «circled line» – membrane, which later, in 57 years, with the appearance of microscopic technique, the English scholar William Bowman (1816–1892) described this membrane the second time. It got Bowman’s name in spite of his opinion that O.M. Shumlyansky had the priority in this sphere. In the dissertation O.M. Shumlyansky described and had drawn uriniferous tubules with their retroversion, and in the second half of 19th century German pathological anatomist Friedrich G.J. Henle (1809–1885) the second time described them, because of that they got only his name. O.M. Shumlyansky proved that these tubules did not connect with arterial capillaries, like the outstanding anatomists considered at that time.

**5. Illya Vasylyovych Buiallsky (1789–1866)**

*Illya Vasylyovych Buiallsky* was Ukrainian and Russian doctor, urologist, and surgeon. He was born in August, 6, 1789, in Vorobyovka village, Chernihiv region in the family of clergyman. He studied at Novhorod-Siversky district school, after that graduated philosophical classes of Chernihiv seminary. In 1809 he started to study at Moscow branch of St. Petersburg Medical Surgery Academy. In a year he moved to St. Petersburg. When he was a second-year student, he assisted in surgery operations and was a lecturer for the first-year students in Anatomy. After the graduation of this Academy with Honour, in 1814 he was left as a dissector at the normal anatomy department. In 1823 he defended the dissertation devoted to the investigation of aneurisms. In 1825 he worked as an extraordinary professor, and from 1833 up to 1844 he became a Professor of the normal anatomy department. Between 1833 and 1866 he taught anatomy for students of Academy of Arts, giving them the lectures.

I.V. Buiallsky investigated topographic anatomy of organs and research methods in anatomy. “Anatomy-Surgical Tables” (1838–1852), and “Short General Human Body Anatomy” (1844) were the most important of his works. I.V.Buiallsky was the founder of corrosive technique here. He had been working for more than 8 years, and he made more than 300 preparations, which are kept in the Anatomy Museum of Military-Medical Academy.

*Buiallsky’s Method* is and original method of getting corrosive preparations (models) of internal organs, offered him in 1863.

**6. Stepan Khomych Khotovytsky (1791–1885)**

*Stepan Khomych Khotovytsky* was an obstetrician and gynecologist, one of the founders of Petersburg Pediatric School. He was born in 1796 in Krasyliv village, Volhynia region in the family of clergyman. He got home elementary education, in 1808 studied at Volhynia seminary, and as the excellent student got the right to enter St. Petersburg Medical Surgery Academy. After graduation in 1817 he was drawn out abroad and visited Vienna, Paris, Göttingen, Edinburgh, and London. In 1822 S.Kh. Khotovytsky was appointed an Adjunct-Professor of Obstetrics, Forensic Medicine and Medical Police Department at Medical-Surgical Academy, and later, in addition, he had taken the duties of doctor in charge at hospital.

In 1823 S.Kh. Khotovytsky defended doctor dissertation “Раеdo gynaicoiatrices synoptica expositio evolutioni et revolutioni vitae superstructa”. After the defense, he was sent out to Astrakhan’ for the investigation of cholera there. In 8 years, during cholera epidemics in Russia, he participated in the work of Cholera Committee. Two monographs had been written after these activities: “About the ulcer in St. Petersburg” (1831) and “About Cholera” (1832), the last book described the history of cholera in details. In early 1830’s, S.Kh. Khotovytsky, replacing Professor S.F. Gorlov, temporarily headed the Department of Obstetrics, Gynecology, and Children’s Diseases, and for 5 years (from 1828 up to 1833), was the obstetrician in St. Petersburg. From 1835 up to 1839, S.Kh. Khotovytsky edited “Military Medical Journal”, and published there many articles in Social Hygiene. In 1844, on behalf of the Holy Synod, S.Kh. Khotovytsky had written a textbook “Folk-Healing Exhortation for Spiritual Colleges” and in 1847, a textbook in Pediatrics. Until 1847, he had been an Ordinary Professor of Gynecology and Obstetrics at Medical-Surgical Academy.

**7. Fedir Ivanovych Inozemtsev (1802–1869)**

*Fedir Ivanovych Inozemtsev*was a physician, Actual State Counsellor, a Member of Medical Council of the Ministry of Internal Affairs, clerk’s son. He was born in February, 12, 1802, in Kaluga hyberniya (region), Russian empire. In 1819 he graduated Kharkiv gymnasium and entered Kharkiv University. After two years of general courses he wanted to become a medical student, but as a scholarship holder he had to follow the instruction of university authorities, because of that he entered historical-philological faculty, he left the study in a year, so he had to work as a teacher for three years. From the very beginning he taught History, and later Mathematics in the district college of Lgov, Kursk hyberniya (region). In 1826 he entered Kharkiv University again and became the second-year student of medical faculty, and in 1828 he was sent to the further training to the Professor Institute of Dorpat University (now it is Tartu State University, Estonia), where in March,13, 1833 he got the degree of Medicine and Surgery, collecting materials in Berlin, Dresden and Vienna. In 1835, after the return from abroad, F.I. Inozemtsev, he gave the test lecture, and was appointed as a Professor of Practical Surgery at Moscow University. Later, in 1839, with the mission of the Minister of Public Education he visited the best clinics of Germany, Italy and France. The project for practical medical training at Russian universities was the result of this visit. In 1859 he retired.

The activity of F.I. Inozemtsev was directed on the mostly practical study of Medicine, and in this field he achieved significant success: he founded the School of Practitioners. Moreover he was very popular and had about 6000 patients. Because of busy practical work F.I. Inozemtsev did not write a lot, he noticed that literary work had a minor significance for him. Professor published the work “About Loder’s Merits in Surgery” (1827) and some articles devoted to the topical items of medicine. Between 1858 and 1862 he edited “Moscow Medical Newspaper”, later gifted it to Moscow Society of Russian physicians, founded by I.F. Inozemtsev in 1861. He died in Moscow in August, 6, 1869.

**8. Olexii Matviyovych Philomafitsky (1807–1849)**

*Olexii Matviyovych Philomafitsky*was Russian physiologist, was born in Malakhovo village of Romaniv district, now Yaroslav region in 1807. In 1828 he graduated medical faculty of Kharkiv University, and then in 1833 – the Professor Institute of Dorpat University (now it is Tartu State University, Estonia). Between 1833 and 1835 he passed courses on physiology improvement in Germany at the laboratory of Johannes Peter Müller (1801-1858), German physiologist. Since 1835 O.M. Philomafitsky had been working as a Professor of physiology and comparative pathology, and later, from 1847 he was a Professor of physiology and comparative anatomy of Medical faculty of Moscow University. O.M. Philomafitsky was the author of the first Russian text-book in Physiology, it was written from materialist point of view. He was in opposition to the idealistic conceptions in medicine. O.M. Philomafitsky was the founder of experimental pathology. He offered the original hypothesis about the cyclic character of nervous activity; he was the first scholar in Russia, who used a microscope for the investigation of blood elements. The experimental development of the blood transfusion and influence on the organism of sulphuric ether were the sphere of his scientific interests. Together with M.I. Pyrohov (Pirogov) they worked out a method of intravenous anesthesia in 1847.

**9. Mykola Ivanovych Pyrohov (Nikolai Pirogov) (1810–1881)**

*Mykola Ivanovych Pyrohov* was a surgeon, naturalist, educator and public figure, the founder of an experimental anatomy and field surgery. He was born in November 13 (25), 1810 (according to some other data 1808) in Vyshnya village (now Vinnytsya), Podillya region, in the family of military paymaster. He was 13th child in the family. Elementary education he got at home, but after that he studied at the private boarding school in 1822–1824. In 1824 he entered medical faculty of Moscow University. In 1828 he graduated it and entered Professor Institute of Dorpat University (now it is Tartu State University, Estonia). In 1833 he defended doctor dissertation and moved to Berlin to continue the education. In 1841 he headed Surgery Department of Medical Surgery Academy in St. Petersburg. He was elected as a Correspondent Member of St. Petersburg Academy of Sciences in 1847. M. Pyrohov was participated in the Crimean War (1854–1855) and in the defense of Sevastopol during it, Franco-Prussian (1870–1871) and Russian-Turkish (1877**–**1878) wars. He was the first doctor, who made the operation using anesthesia in the field conditions, used fixed bandage, and offered some surgical operations. He was fighting with class prejudices in education, insisted on the autonomy of universities, and general elementary education. Atlas “The Topographical Anatomy” (1851–1854 рр.) compiled by M. Pyrohov had got the world-wide popularity.

**10. Mykola Vasylyovych Sklifosovsky (1836–1904)**

*Mykola Vasylyovych Sklifosovsky* was a famous professor, Head of Emeror Clinical Institute in St. Petersburg, author of scientific works devoted to field medicine and abdominal surgery. He was born in a small village Quarantin not far from the Dubossary town (Tyraspol district, Kherson region) in March, 25, 1836. Probably, his parents were Moldovans, and a surname Sklifos was spread in that place. Later, the family moved to Odessa and there Mykola entered a gymnasium.

Mykola considered doctor’s profession very prestigious and in the childhood he decided to become a doctor. After the graduation of gymnasium he entered Medical faculty of Moscow University. In 1859, after graduation, he backed to Odessa. From the very beginning he had been working as a doctor, and in some years in town’s hospital headed a Surgery department.

He was very responsible in the work. He always tried to improve own surgery skills. In three years, in 1863, he defended dissertation and got Doctor’s degree in Medicine. In 1866 Mykola Sklifosovsky went abroad to improve knowledge and practical experience. In this dispatching he spent three years and he had the chance to work in the hospitals of France, Germany and England. He noticed peculiarities of medical treatment there. He understood that it was necessary to sterilize the surgical instrument and the operating field. At that time many doctors were sure that such a procedure was not compulsory, even harmful. M. Sklifosovsky worked out the methodic of surgical instrument sterilization.

In 1870 Mykola Vasylyovych was invited to the Department of Surgery at Kyiv Institute. In a year, Emperor Medical-Surgery Academy offered him a place at the Department of Surgical Pathology. Working here, Sklifosovsky had written some works, such as: “The Goitrectomy”, “Operative Treatment of Immobility of Knee Joint”, “Pappila New Growth of Ovary (papiloma). Its ablation”, and others.

From 1880 up to 1893 M.V. Sklifosovsky was the Dean of Medical faculty at Moscow University; thanks to his efforts, the famous “Clinical town” in Divoche field (Moscow) had been built. He was the pioneer of introduction the principle of antiseptic and aseptic to home surgery, abdominal surgery, and field surgery. He offered methodic of different operations. In 1897 he was a President of 12th International Doctor’s Congress in Moscow and 1st Congress of Russian Surgeons in 1900.

**11. Illya Illich Mechnykov (1845–1916)**

*Illya Illich Mechnykov* is best known as an immunologist. He was born in estate Panasivka, which is not far from Ivanivka village (Kharkiv region) in May, 3, 1845, in the family of Guard officer and was the fifth (the youngest) child. In 1856 he entered Kharkiv gymnasium (to the second class). He graduated it with gold medal in 1862. From 1862 up to 1864 I.I. Mechnykov was a listener of naturalist department of Physics and Mathematics at Kharkiv University. He took an external degree and published in Germany his first scientific work. Thanks to the efforts of M.I. Pyrohov Mechykov got a state stipend for scientific investigations in West-European Laboratories. In 1868 he got Doctor Degree in Zoology.

In 1867 he was elected as an Associate Professor of Novorossiya University (now it is Odessa University), and in a year he got the same position at St. Petersburg University. Together with a researcher O.O. Kovalevsky, he founded new field of science the comparative embryology. Moreover, he also founded comparative pathology, evolutionary embryology, and immunology, combining them into the scientific school.

In 1882 he discovered the phenomenon of phagocytosis, and in 1883 he was elected a Correspondent Member of Academy of Sciences. In 1886 together with Mykola Fedorovych Gamaliya he founded the first bacteriological laboratory in Russian empire. In 1888 he had been working in Paris Pasteur Institute. Phagocytosis theory of immunity I.I. Mechykov described in his work “Immunity in Infectious Diseases” (1901). In 1902 he became Honoured Member of St. Petersburg Academy of Sciences. He worked out the theory of multi-cellular organisms’ origin.

I.I. Mechnykov developed the problem of aging (“The Nature of Man”, 1903 and “The Prolongation of Life: Optimistic Studies”, 1907) and put into the scientific circulation the term “Gerontology”. In 1908 Illya Mechnykov and Paul Érlich got the Noble Prize in Physiology for immunity investigations.

**12. Vasyl’ Parmenovych Obraztsov** **(1851–1920)**

*Vasyl’ Parmenovych Obraztsov* was a physician, Professor, Doctor of Medicine, one of the founders of Kyiv School of Therapy. He was born in the small town Gryazovets’ (Vologda hubernia) in 1851. After the course of seminary, in 1870 he entered Military-Medical Academy, and successfully graduated it in five years. In 1875 he started to work as zemsky doctor. From 1877 up to 1879 he worked as a military doctor; after it he went abroad to improve the experience. He had courses of Professor Rudolf Virchow and other outstanding specialists of that time. In 1880 he defended dissertation “About the Morphology of Blood Production in Mammals’ Bone Marrow”. Later, he was elected a Privat-Docent, and in some time he became a Professor of Clinic of Internal Diseases at Kyiv University. Professor V.P. Obraztsov published his dissertation and some articles, devoted mostly to diagnostics.

**13. Volodymyr Kostyantynovych Vysokovych (1854–1912)**

*Volodymyr Kostyantynovych Vysokovych*was Ukrainian pathological anatomist, bacteriologist and epidemiologist. He was born in town Gaisin, Vinnytsya region, in March, 2 (14), 1854. He studied in the First Kharkiv gymnasium, which he graduated with gold medal. He entered medical faculty of Kharkiv University which he graduated in 1876. In 1895 he was a Professor of Pathological Anatomy Department at Kyiv University. His basic scientific works were devoted to pathological anatomy of syphilis and tuberculosis, pathogenesis, immunity and epidemiology of some infectious diseases.

Together with I.I. Mechnykov he started to ground the main points of theory that got the name of reticular-endothelial system. V.K. Vysokovych united morphological and bacteriological methods of investigation and in 1882 he was the first scholar, who defined the origin of fibroblasts and floating cells of connective tissue from histiocytes; in 1886 he proved the ability of endothelial cells of blood vessels and floating cells of connective tissue to catch injected bacteria into the blood; in 1888 he substantiated the importance of regional lymph nodes in infectious pathogenesis; in 1889 he ascertain that killed for vaccination bacteria worked against anthrax and plague (1896); he proved the identity of tuberculosis and scrofula (1890). V.K. Vysokovych organized anti-epidemic cholera expeditions in Kharkiv (1892), and in Kyiv (1908), and plague epidemics in Bombay (1896) (India); and in Odesa (1902, 1910).

**14. Mykola Fedorovych Gamaliya (1859–1949)**

*Mykola Fedorovych Gamaliya* was Ukrainian, later, Soviet microbiologist and epidemiologist. He was born in February, 5 (17), 1859, in Odessa, Kherson region. His grandfather, Mykhailo Leontiyovych Gamaliya was a doctor, who wrote the monography devoted to anthrax in 1789.

M.F. Gamaliya studied in Novorossiya University (now it is Odessa University), which he graduated in 1880. After three years of study at Military Medical Academy in St. Petersburg he backed to Odessa. He worked at hospital and started to develop grounds of bacteriology.

As a result of competitive selection in 1885 M.F. Gamaliya went to Paris to Louis Pasteur laboratory. There he investigated rabies, method of preparing of vaccine and methodic of vaccination against this disease.

In 1886, M.F. Gamaliya together with I.I. Mechnykov founded in Odessa the first bacteriological station in Russia, and started to vaccinate people against rabies. Odessa bacteriological station made such vaccinations for about 1500 people. The per cent of morbidity among vaccinated people slowly started to decrease. In 1892 M.F. Gamaliya defended doctor dissertation “Etiology of cholera from the experimental pathological point of view”. In 1898 M.F. Gamaliya discovered bacteriolysin and originator of bird cholera. M.F. Gamaliya grounded the importance of disinsection for liquidation of typhys and recurrent fever. Doctor M.F. Gamaliya published many scientific works devoted to prophylaxis of rabies, cholera, smallpox and other infectious diseases.

**15. Danylo Kyrylovych Zabolotny (1866–1929)**

*Danylo Kyrylovych Zabolotny* was Ukrainian and Russian bacteriologist. He was born in Chobotarka village, Olhopil district, Podillya region in December, 16 (28), 1866. After graduation of Odessa gymnasium in 1884, he entered Natural department of Physics and Mathematics of Novorossiya University in Odessa, but he was expelled from it for the participation in students’ revolutionary meeting and imprisoned. Later, he was invalided out of the prison. In 1889**–**1891, he had been working in Odessa bacteriological station under the direction of O.O. Kovalevsky and F.M. Kamens’ky. In 1891, some university professors helped him to take an external Master degree in Natural Sciences. After that D. Zabolotny became a third-year student of Medical faculty of Kyiv University. After graduation of University in 1894, he moved to Kamyanets’-Podilsky. In two years he worked as a surgeon in Kyiv military hospital and at the laboratory of general pathology of Professor V.V. Pidvysotsky.

Since 1897 he had been visiting different Asian countries for investigation of tropical diseases (plague and cholera) in India, Arabia, China, and Persia (now it is Iran). For a year he had been working at Louis Pasteur’s Institute in Paris. In 1899 he started to teach Biology for listeners of Petersburg Female Medical Institute and worked as a bacteriological specialist at the Institute of Experimental Medicine.

In 1928**–**1929 he was a President of All-Ukrainian Academy of Sciences and a founder of the Institute of Microbiology and Epidemiology in Kyiv.

**16. Volodymyr Petrovych Filatov (1875–1956)**

*Volodymyr Petrovych Filatov*was an outstanding ophthalmologist, and a founder of Odessa Institute of Ophthalmology and Tissue Therapy. He was born in February, 15 (27), 1875 in Mykhailivka village, Saransk district, Penza region, in the family of zemsky doctor Petro Fedorovych Filatov. P.F. Filatov was a skillful surgeon and a proficient of ophthalmological diseases. Four of his six brothers also were doctors. According to the uncles’ advice, the outstanding pediatrician Neel Fedorovych, who headed the department at Moscow University, Volodymyr Petrovych entered Medical faculty of that University. In students years Volodymyr helped father at hospital to realize a reception of patients and to assist during the operations. This practice helped to accumulate a valuable doctor’s experience in ophthalmology.

In 1903 V.P. Filatov was invited to work as an ophthalmologist in the clinic of Novorossiya (Odessa) University, when he was just 28-year-old. In 1906 V.P.Filatov became a Chair Assistant at the department of Odessa University and in three years he defended doctor dissertation “The Teaching of Cell Poisons in Ophthalmology”.

In 1909 the young Doctor of Medicine got Private-Docent course, and since 1911 up to 1956 he had headed the Ophthalmology Department of Odessa University. In 1912 V.P. Filatov made cornea transplantation by the method of transversal keratoplasty, had realized his own student’s idea.

In 19013 V.P. Filatov discovered (published in 1917) an effective method and bucket-handle graft recognized all over the world. The essence of this method: during plastic operation a bucket-handle graft had been formed from the skin, and it fed off transplanted part of the body. This method was used in World War I for the treatment of military-men to avoid facial defects and other wounded parts of body.

Later, Professor V.P. Filatov introduced into medical practice new effective method of treatment – tissue therapy. “Biogenic stimutants” were used for the therapy of ophthalmological, skin, internal, nervous, and children’s diseases, which had been considered incurable before.

In the middle of 1930s’ Professor V.P. Filatov founded the Institute of Experimental Ophthalmology, and headed it. The slogan of the Institute “Each Human Being Has to See the Sun!”.

V.P. Filatov was an outstanding ophthalmologist, the Member of Ukrainian Academy of Sciences and Academy of Medical Sciences of the USSR, the Hero of Socialist Labour, and the State Prize winner. The name of V.P. Filatov is famous all over the world. At the territory of the Institute of a monument was set for the founder.

**17. Mykola Dmytrovych Strazhesko (1876–1952)**

*Mykola Dmytrovych Strazhesko* was a famous physician and an organizer of science. He was born in December, 30, 1876 in Odessa in the family of State Counsellor. His father was a lawyer. Mother originated from the family of hetman Konashevych-Sahaidachny.

After the graduation of gymnasium in Odessa, Mykola Strazhesko entered medical faculty of Kyiv University, which he successfully graduated in 1899, and got the Diploma with Honour. He was left for a work at the Department of Pathology and Special Therapy. At the same time he had been working as an intern at the therapeutic department of Kyiv City Hospital, under the direction of Professor V.P. Obraztsov.

In 1901 he learnt the methodic of getting cardiograms of Professor Pierre Potain in France, and had the improvement courses in the clinic of Professors Leiden and Senator (Berlin). In 1902–1904 he worked with I.P. Pavlov researching Nutrition Physiology, and at the departments of Biochemistry, Pharmacology, Pathological Anatomy, and in the bacteriological laboratory. In autumn of 1904 he defended doctor dissertation devoted to physiology of intestine. After the returning to Kyiv, he started to work as a senior house-surgeon in the hospital of therapy faculty, under the direction of Professor V.P. Obraztsov.

Later, he worked at Kyiv Female Medical Institute, Kyiv University, and Odessa University. After the revolution he did not leave Ukraine.

M.D. Strazhesko headed the Institute of Clinical Physiology of Ukrainian Academy of Sciences and founded the Ukrainian Research Institute of Clinical Medicine. During the World War II he was a consultant of evacuation hospitals, investigated the problem of wounds’ sepsis and methods of its treatment. The world fame he had got after the detail description of different clinical forms of myocardial infarction. Together with V. Vasylenko he worked out the classification of circulatory insufficiency.

**18. Olexander Olexandrovych Bogomolets’ (1881–1946)**

*Olexander Olexandrovych Bogomolets’* was Ukrainian pathological physiologist, a founder of Ukrainian School of Pathological Physiology, Endocrinology and Gerontology, and the organizer of Ukrainian Science.

Olexander Bogomolets’ was born in May, 12 (24), 1881, in Lukyanivska jail (Kyiv), in the family of revolutionaries. His father was zemsky doctor. His mother participated in revolutionary activity of radical people’s organization “South-Russian Worker’s Union”. Newborn Olexander was transferred to his grandfather for upbringing, because his parents both were in prison.

In the school age Olexander started to get home education, and then at gymnasiums of Kyshyniv and Kyiv. He graduated school with a Gold Medal.

In 1900 he started to study at Kyiv University, judicial department, and later he transferred to medical one. He had to move to Novorossiya University in Odessa.

During the study Olexander published 5 scientific works. After the graduation he worked at the department of General Pathology. In two years under the direction of Professor V.V. Voronin, he defended doctor dissertation «About the Problem of Microscopic Structure and Physiological Importance of Suprarenal Glands in Healthy and Sick Organism» at Petersburg Emperor Military-Medical Academy. Academician I.P. Pavlov, the famous physiologist was one of his opponents during the defense. That year O. Bogomolets’ was elected a Private-Docent of General Pathology department of medical faculty at Novorossiya University in Odessa. In 1911 he was sent to France to the traineeship to the Physiology department of Sorbonne (Paris) for getting of Professor Degree. The same year, after the return from France, he was appointed as an Extraordinary Professor of the department of General Pathology and Bacteriology of medical faculty at Saratov University.

In 1917 O.O. Bogomolets’ headed Saratov High Female Medical Courses.

During the civil war in Russia (1918–1921) Doctor O.O. Bogomolets’ offered the complex of anti-epidemic measures for prophylactic of cholera and typhus. In October, 1918, he founded State Institute of Microbiology and Epidemiology of South East of Russia (“Microbe”) it was the first scientific-research institute. In 1923 he founded in Saratov, the first anti-malarial laboratory in the USSR.

O. Bogomolets’ participated in the foundation of the Institute of Hematology and Blood Transfusion it was the first one in the world. In 1928 he headed it. Together with his pupils he worked out the unique methodic of donor blood, which is used up to nowadays nearly without any changes; and also he proved the universal characteristics of the first blood group. O. Bogomolets’ headed this Institute up to 1931. In 1930, he was elected as a President of Ukrainian Academy of Sciences. He offered such structure for the Academy that is still successfully worked. In Saratov he started to write a textbook in Pathological Physiology, which later transferred into 5-volume edition. One of the editions was realized in Ukrainian language (in 1934).

In Saratov Olexander Bogomolets’ worked out the immune cytotoxic anti-reticulum serum, which forced the healing of wounds, and made the human immunity more active. Field and evacuation hospitals during the World War II successfully used “Bogomolets’ Serum” for the treatment of infectious complications after the wounds and fractures.

At the beginning of 1941, Olexander Bogomolets’ founded in Kyiv a Clinic to combat of Premature Aging. Later, at its basis the Institute of Gerontology was founded. At the beginning of the war in 1941 Ukrainian Academy of Sciences was evacuated to Ufa (now the Republic of Bashkortostan of Russian Federation). There Olexander Bogomolets’ together with Academician Mykola Burdenko founded Academy of Medical Sciences of the USSR. In spring of 1944 O. Bogomolets’ returned to Kyiv, where he headed the work devoted to the renewing of Ukrainian Academy of Sciences.

In conclusion we have to underline that Olexander Bogomolets’ made from Kyiv one of the most prestigious scientific centers of the USSR.

**19. Mykola Mykhailovych Amosov (1913–2002)**

Life and activity of Mykola Mykhailovych Amosov (1913–2002) Doctor of Science, Professor (1913–2002) was a Soviet and Ukrainian doctor of Russian origin, heart surgeon, inventor, best-selling author, and exercise enthusiastic scholar, known for his inventions of several surgical procedures for treating heart defects. He wanted people to live long conscious life with healthy body. He was sure that healthy diet and physical activity helped people to keep fit.

He was born to Russian peasants, Mykola Amosov fought in World War II. After the war he moved to Kyiv and in 1965 wrote his famous book “The Thoughts and the Heart”, selling millions of copies. He was the recipient of multiple awards.

In 2008 academician Mykola Amosov was placed second in their ranking of “our greatest compatriots” by the viewers of the TV show “The Greatest Ukrainians”.

Mykola Amosov had founded the first department of pectoral surgery, founded Kyiv Institute of Cardio-Vascular Surgery. He also designed an artificial limb of a mitral valve.

**TESTS**

|  |  |  |
| --- | --- | --- |
| 1. | Who out of the scholars of Russian Empire in 1802, published the textbook “Short Anatomy”, edited 5 times and contained Russian anatomy terminology? | |
|  | A | D. S. Samoilovych |
|  | B | N. M. Maksymovych-Ambodic |
|  | \*C | P. A. Zagorsky |
|  | D | S. G. Zybelin |
| 2. | Who was the founder of the home school of Anatomy at the beginning of 19th century? | |
|  | A | O. M. Philomafitsky |
|  | B | Ye. J. Mukhin |
|  | C | M. M. Terekhovsky |
|  | \*D | P. A. Zagorsky |
| 3. | In the first half of 19th century, the new medical discipline Topographic Anatomy was formed. Who of scientists of that time had said: “There was not medicine without surgery, and surgery without anatomy”? | |
|  | A | I. F. Bush |
|  | \*B | M.I. Pyrohov |
|  | C | P. A. Zagorsky |
|  | D | S. H. Zybelin |
| 4. | In 1918, inhabitants of Petrograd were vaccinated against plague, and later vaccination was introduced the whole country. Who of the scholars initiated introduction of it? | |
|  | A | D. S. Samoilovych |
|  | B | I. I. Mechnykov |
|  | C | I. M. Sechenov |
|  | \*D | M. F. Gamaliya |
| 5. | Who of the home surgeons of the second half of 19th century defended doctor dissertation in Kharkiv University and developed problems of field surgery started by M.I. Pyrohov? | |
|  | A | I. F. Bush |
|  | \*B | M. V. Sklofosovsky |
|  | C | P. A. Zagorsky |
|  | D | F. I. Inozemtsev |
| 6. | Who of doctors introduced the assortment of injured people during the Crimean War and founded field surgery? | |
|  | A | M. V. Sklifosovsky |
|  | \*B | M. I. Pyrohov |
|  | C | P. A. Zagorsky |
|  | D | F. I. Inozemtsev |
| 7. | In 19th century the home corrosive technique was worked out. Who of Ukrainian scholars made the preparation of freeze young man’s body ran in bronze? | |
|  | A | O. M. Philomafitsky |
|  | \*B | I. V. Buiallsky |
|  | C | I. M. Sechenov |
|  | D | S. Kh. Khotovytsky |
| 8. | O.M. Philomafitsky (1807–1849) was an outstanding physiologist, who graduated Emperor Kharkiv University. Which problems did he develop? | |
|  | A | Higher mental functions |
|  | B | Blood circulation physiology |
|  | C | Digestion Physiology |
|  | \*D | Narcosis and blood transfusion |
| 9. | S. Kh. Khotovytsky was one of the first pediatricians. Which book did he publish? | |
|  | A | Lectures about the functioning of main digestive glands |
|  | B | About human body structure |
|  | \*C | Pediatrics |
|  | D | Reflexes of cerebrum |
| 10. | In 18th century in Russian empire the active development of obstetrics started. Who of Ukrainian scholars had written the book “The Art of Swaddling, or the Science of the Midwives’ activity”? | |
|  | A | D. S. Samoilovych |
|  | B | M. M. Terekhovsky |
|  | \*C | N. M. Maksymovych-Ambodic |
|  | D | O. M. Shumlyansky |
| 11. | Which method of objective diagnostics of abdominal diseases offered the founder of Kyiv scientific academic School of Therapy V.P. Obraztsov? | |
|  | A | Auscultation |
|  | \*B | Deep medical changeable palpation |
|  | C | Clinical analyses |
|  | D | Percussion |
| 12. | Which of medical sciences enriched Ukrainian physician I.V. Buiallsky? | |
|  | A | Anatomy, Surgery |
|  | \*B | Hygiene, Epidemiology |
|  | C | Pediatrics, Obstetrics |
|  | D | Physiology, Therapy |
| 13. | Who of Ukrainian scholars-pupils of I.I. Mechnykov in Microbiology and Epidemiology do you know? | |
|  | \*A | D. K. Zabolotny, M.F. Gamaliya |
|  | B | I. M. Sechenov, I.P. Pavlov |
|  | C | M.M. Terekhovsky, D.S. Samoilovych |
|  | D | М. І. Pyrohov, M. V. Sklifisovsky |
| 14. | Who was the first of doctors introduced in Russian empire plaster bandage, which helped to avoid amputation of an extremity for soldiers? | |
|  | A | І. М. Sechenov |
|  | B | I. F. Bush |
|  | C | M.V. Sklifisovsky |
|  | \*D | M. I. Pyrohov |
| 15. | Which theory of immunity worked out Russian and French biologist, Noble Prize Winner in 1908 І. І. Mechnykov? | |
|  | A | Humoral |
|  | B | Pneumatic |
|  | C | Mixed |
|  | \*D | Cytophagus |

**QUESTIONS FOR SELF-CONTROL**

1. Who of physicians described clinical course of the plague?

2. Who was the founder of home Obstetrics and Pediatrics?

3. Name the I. V. Buiallsky methods.

4. What do you know of M.I. Pyrohov?

5. In which medical field worked S.Kh. Khotovytky?

6. Who of scientists presented cytophagus theory of immunity?

7. Who of medical scientists founded bacteriological station in Odessa?

8. Who had founded home Scientific School of Anatomy?

9. Who introduced the assortment of injured military-men during Crimean War?

10. Who of Ukrainian scholars made the preparation of freeze young man’s body ran in bronze?

11. Which book Ukrainian scholar S. Kh. Khotovytsky had written?

12. Which theory did Ukrainian scientist M.M. Terekhovsky contradict?

13. Who of the scholars of the first half of 19th century had said: “There was not medicine without surgery, and surgery without anatomy”?

14. Which problems of Physiology and Medicine did the former student of Kharkiv University O.M. Philomafitsky study?

15. What was the way of infection for bubonic plague, from D.S. Samoilovych’s point of view?

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HISTORY OF MEDICINE

Methodical developments for teachers

to conduct a practical lesson on the topic

***“Medical Scholars of Ukraine”***

for the preparation of students in specialties: 222 “General Medicine”, 221 “Dentistry”.

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