Term	Topic content
Fungal disease	The great spreading of fungus diseases, at the considerabl proportion, explains the heightened interest some of medica workers about problems of mycology. Pathogenic mycosis-agent mycosis concern to the class of inferior plants. The mos group of pathogenic mycosis is hyphomycete or filar fungu: dermatophitus (athlete's feet), which can form filars of mycelium and spores. They also can parasitize into the soil, on the plants on the skin and hair of animals. Because of that infection with fungus can going as directly from ill man so as during contaci with animals and by contact with household goods. Out ol organism people or animals the fungus can safe their vieability md virulence owing to forming of spores during a lot of years: life under the most unfavourable conditions. The factors which are conductiving of infection with fcngus diseases are not enough density and compactness of keratin into the corneous sphere of epidermis, pH's biasing of protective mantle of skin into the neutral or even into the alkaline ade and heightened sweating. The most auspicious to the infection with fungus diseases are persons which had infection diseases, have diabetes, have nervous or endocrine disease. The history of science about dermatophitus was begun with opening in 1839 by Shenliain the pathogenic organism by name "phavus" (tetter)- achorion. In future the most important events into the mycology was discovery of pathogenic organism of Pityriasis versicolor (multicolor herpes) and erythrazma and actinomycets. The considerable was discover by Saburo special vivifying medium what gave possibility to microbiologist to realize discovery of series of new fungus at the expense of their growing at this medium. It's also necessary to recall the discovery of penicillin (lat. Penicillinium) by Fleming in 1928. The scientist observed that the colonies of staphylococci, which were surrounded by bluish- green mold stopped in their growth and development. All fungi can be relatively divided into 3 groups according to their behavior as to the man's organism, saprophytes,

	dermatophitus (athlete's foot) and molds. Such fungi are called saprophytes which form colonies of different size without any clinical appearances of inflammatory kind. The changes caused by these fungi are not infectious and they are not man transmissible or by surrouding us objects. According to the carried out observations the fungi make up their location exclusively in the horny layer (lat. Stratum corneum) of the epidermis. For example, micro-sporons and trichosporons are such fungi. Dermatophitus (on the man's skin) parasites not only in the horny layer of the epidermis but they also penetrate into deeper layers of the skin, into hair follicles, hair. As the result of the toxic effects of metabolism of these fungi there appear inflammation of various types on the affected skin of the patient. In some cases the most part of the fungi can afflect the internals (lungs, liver, kidneys and a spleen) and even skeletal system. In contrast to (unlike) the fungi-saprophytes the dermatophitus (athlete's feet) are infectious and they are transmissible from one man to another or from affected animals to a man. Fungi of hyphomicets class are related to the molds (mould fungi). Except the dermal changes they often cause affections of internals (internal organs) but like the fungi-saprophytes they are not infectious and transmissible from people and animals, neither in direct contact, nor by house-hold articles. Their parasitism depends on the general health status of the man's organism. In some cases the molds can change the clinical picture of the existing dermal disease (for example, the eczema), or they can delay the treatment process of some diseases. Among fungal diseases the keratomycosises are distinguished, during which the process takes place only in the horny layer of the epidermis without marked changes and with slight contagiousness; the dermatophitus (athlete's foot) during which the fungi parasitizeing in the skin and affecting its appendages (nails, hair), cause strongly marked inflammations; the mucocutaneous candidiasises, the candidiasises of internals and deep mycosis during which the fungi penetrate not only into the derma but also into the deeper

	located tissues, often causing hard forms of the overall affections of internals.
Keratomycoses	The diseases of this group are characterized by the presence of changes only in the homy layer of the epidermis, the absence of any inflammatory processes on the skin and slight contagiousness. The keratomycosises also include many Pityriasis versicolor and erythrasma. More often the keratomycosises affect persons with heightened perspiration and displacement of the pH surface of the skin toward alkaline side. In the keratomycosises nails and hair are not affected. **Pityriasis Versicolor** The pathogen - Pityrosporum orbiculare (micro-spore furfur) was discovered by Eichstedt in 1846. In the microscopy the fungus represents by itself short and thick fibers of the mycelium, which are interlaced between themselves. Small spores of this fungus are round shape and they are grouped in the separate nest-like formations. In connection with the practical absence of any contiguousness the family cases of morbidity by this herpes are not described. During the histological examination of biophtats from the affeted places there is marked some loosening of the homy layer of the epidermis with the presence of the fungus colonies. More often the herpes is localized on the skin of the upper part of the back and chest but in some cases it can affect the stomach skin, the outside surface of shoulders and even the hair part of head. We were also observing the case when this herpes affected the face skin but such cases happen very rarely. Clinically the Pityriasis versicolor is characterized by the appearance of brown maculae of different tints with slight peeling on the skin. More often these maculae have yellowish-pink color or yellowish-brown one (the color of coffee with milk), the disease begins with the appearance of small maculae which are located around the

	hair follicle. As a rule the nidus of the affection doesn't cause any unpleasant (Further the maculae grow along the periphery, interflow and form nidus with uneven, scalloped edges.) subjective feelings but in some cases there can be slight itch. In the different climatic zones there can be observed various coloration of the nidus (even with violet tint). Negroes have more light tint of the affected place on the background of black skin. Such peculiarity of the color variety gave the reason to name the disease as the Pityriasis versicolor and the presence of small squame on the surfaces of the nidus affection - to name it as rash-liked herpes. The disease can exist for many years and often even after the valuable treatment it can give relapse. Under the action of sun isolation the fungus colonies are perished, and hypochromic or achromic (the loss of pigment) maculae that often resemble vitiligo or syphilitic leukoderma are formed on the places of the affection; (the horny layer of the skin exfoliates). It happens because the fungus colonies don't pass ultra- violet rays into the deep layers of the epidermis and melanocytes don't produce melanin in the affected places and the all around skin is covered with sun-tan. When the tan is over these maculae disappear as a rule. The diagnostic of the Pityriasis versicolor is not difficult. The diagnosis is made on the basis of the typical appearance and location of the maculae and the presence of small peeling on their surfaces. In active form this herpes must be differentiated from syphilitic roseole and Gibbert's pink herpes. The syphilitic roseola and maculae during the pink herpes have round and oval shapes, and they don't grow on the periphery and do not flow together. The syphilitic roseola doesn't peel and the maculae during the pink herpes only can peel in the center, leaving brightly-pink thin rim along the periphery (the symptom of medallion) and their ovals are on the cleavage lines (or Langger's lines). During diascopy the syphilitic roseola and maculae of the pink herpes disappear and during Pityriasis versicolor they stay. In the complicated causes for the differential diagnosis it can be conducted the sulfur reactions determination which are always positive in the secondary syphilis. The semi-leukodermoid maculae of the Pityriasis versicolor must

	be differentiated from the syphilitic leukoderma, the difference is in their places of localization and their uneven scalloped outlines. A number of additional methods of analysis (research) is also used for the diagnostics of the Pityriasis versicolor. The most significant thing in such diagnosis is the defections of the mycelium threads in the squamae taken by scraping from the affected parts of the skin. It can be done by microscopy. The so- called Balzer's test has also the diagnostic importance. The affected parts of the skin are painted with 5% iodine or 1-2% solution of methane blue or brilliant (ethyl) green. Because of the fact that the fungus loosens the horny layer of the epidermis, the affected sections (parts) are painted with iodine more intensively or with aniline dyes. In syphilis and pink herpes Gibbert's test is negative. During the Pityriasis versicolor in the affected places it's also possible to observe (to mark) the positive symptom of "chips" or "hit by a nail" (the exfoliation of squamae during scraping them by a nail). The luminescent diagnostics can also be applied, especially for finding out any affections on the hair part of the head which has the special significance for the right valuable treatment. In the rays of the mercury-quarts lamp which passed through Wood's filter, the maculae of the Pityriasis versicolor shine with red-brown or yellowish color. The method of the named herpes treatment is mainly based on the prescription of exfoliate and anti-parasitical means. For this purpose 10% sulphurtaric or 15-33% sulphuric ointments and nitrofungin (lat. Nitrofunginum) are applied. Also Demjanovytch's method of the skin treatment can be used: after having a shower in hot water with soap (for steaming out the skin) 60% solution of sodium thiosulphate is rubbed in to the skin and soon it must be covered with small crystals of this salt in the result of evaporation. After that 6% solution of hydrochloric acid is rubbed. The following solutions are used for the treatment of the

	Pityriasis versicolor spirit infusion of white hellebore, (especially in the affection of the hair part of the head), Andriasian's solution (10,0 of Urotropin [lat. Urotropinum]; 20,0 of glycerin; 70,0 of 8% Acetic acid). In the resistant forms for the treatment of the given herpes Wilkinson's ointment is used for rubbing into the skin. In the cases of separate nidus the painting with 5% iodine will be enough. Such treatment proceeds for 4-10 days and after its completion all under - and bed - clothes are changed. For prophylaxis of the disease relapses it's necessary to rub daily the skin with 2% spirituous solution of salicylic acid during several weeks. **Erythrasma** Some authors consider that the pathogen of erythrasma is the fungus Corynebacterium (microsporon) minutissimum from the family of Actinomyces but on the basis the erythrasma is unable to be treated by Griseofulvin (lat. Griseofulvini [Fulcini]) unlike other fungous diseases, and it can be treated by erythromycin (lat. Erythromycinum) lately the most of authors believe to consider to be the pathogen, and that the disease belongs to semi-mycosises. And as in the Pityriasis versicolor the pathogen is only in the horny layer of the epidermis and it doesn't affect nails and hair. More often the erythrasma can to be met in men than in women, and in children it occurs extremely rarely (very seldom). The folds are beloved place of localization of the erythrasma such as: inguinal - scrotal, into the axillas anal ones, under mammary gland in women. More seldom the erythrasma can affect other folds (the literature gives description of its localization in the spaces between toes of feet). As a rule, the limited nidus of the disease are not accompanied by any unpleasant subjective feelings but during the process spreading the slight itch can be noticed. The erythrasma begins with the appearance of the sharply limited pink-red maculae of uneven shapes which are enlarged due to their growth on the peripheralparts and during long existence they become

	brown-red. The maculae are covered with delicate rash-liked squamae. Sometimes a rim can be observed on the edge of the macula which is slightly increased above the surrounding surface. The erythrasma proceeding is chronic and it often relapses, especially in obese people with high perspiration. The diagnosis of the erythema can be confirmed by detecting of the coral-red luminescence which is observed under the ultra-violet rays that passed through Wood's Filter. Such fluorescence is caused by the water-soluble porthyrins , which are secreted by the pathogens of the disease in the process of their vital activities. The erythrasma can be differentiated from the epidermophytosis inguinal due to the absence of the marked rim along the peripheral parts of the macula, highly inflammatory processes and vesicles. The erythrasma treatment is carried out in the same way as for the Pityriasis versicolor, with the exception that the flaking-out means are used in less concentrations, taking into consideration the erythrasma localization. 2% spirit solution of iodine, 3-5% salicylic spirit, nitrofungin, mycoseptin (lat. Mycoseptinum), ointment with undecylenic (or undecenoic) acid (undeculen, zincundan [lat. Zincundanum]. 5% Erythromycins ointment is of great effectiveness. For prophylaxis of the erythrasma relapses as well as for the Pityriasis versicolor daily rubbing with 2% spirituous solution of salicylic acid or chlorine quinaldine are conducted.
Candiasises	The candidasies pathogens are the yeast-liked fungi (Candida)- the most spread representatives of the conditionally - pathogenic flora which cause the disease in the cases of the resistance disturbance of organism. The unaffected skin and mucous membranes, the acid reactions of their surfaces, the presence of free fat acid, the constant physiological peeling of the epidermis, the extraction of lyzocite by mucous membranes, the secretory immunoglobulin A and other preventive factors sufficiently effectively counteract the penetration of the fungi of Candida type. To the factors that promote the candidiasis

	infection development belong mechanical traumas of the skin or mucous membranes, high humidity and temperature of the surrounding environtment, the skin perspiration, pregnancy, hypovitaminosis and iron deficiency, the following endocrine diseases (diabetes mellitus, hypocorticoidism, hypoparathyroidism, obesity), immunodeficient states (leurosis, lymphogranulomatosis, AIDS), chronic intoxications (alcoholism, narcotism), disbacteriosis, infectious diseases (tuberculosis, chronic pneumonia and etc.). The main pathogen of the candidiasis in a man is Candida albicans, the constant representative of microscopic flora of people, animals and birds. The yeast fungi as Candida albicans or monilia don't form spores, they have pseudomyceliums and propagate themselves by gemmation. The candidiasis of mucous membranes more often occurs on the oral mucosa in the appearance of stomatitis, glossitis, tonsillitis. The affection can also be in the form of intertrigo rashes (18,3%) onychine (onychitises) and paronychiae (17,6%), vaginitis (14,8%), balanitis (2,8%), jams (2,4%). After its taking off the bleeding surface is formed on its place. The mucosa is swollen. Subjectively there are observed oral cavity dryness and changes in taste perception. The following clinical forms of the oral mucous candidiasis are: the acute pseudomembraneous, chronic hyperplastic, acute atrophic, chronic-atrophic candidiasises. It can be rarely observed the mucous membrane affection of vagine (vulvovaginitis), which can occur either in adult women or in little girls. During this in the case with oral mucosa there appear greyish-white lid-like or film-like coating on the hyperemia background and intensive excretions in vagina and on cervix of the uterus. In such cases the patients suffer from intensive peeling. As casuistry it can also possible to observe the mucosa affection of a urinary bladder and urethra. The disease has a long-lasting character with frequent relapses. The acute Atrophic candidiasis more often develops on the background of prolonged application of broad - spectrum antibiotics or glucocorticoids. The tongue mucosa becomes glabrous, hypermiacal, thin and without

	papillas. During the chronic hyperplastic candidiasis of folds on the oral mucosa there appear transparent or white plaques with uneven bottom and irregular edges. The plaques are surrounded by hypermiacal narrow wreath. The development of the candidiasis of mouth angles (angular stomatitis [lat. Angulus infectiosus Candidamycoticus]) is furthered by their maceration by saliva during increased salivation; or by the habit to lick our lips. As a rule both muco - gingival (oral angular) folds are affected. There are formed erosions and painful fissures surrounded by nacreous – white edging of the macerative Homy layer. Gradually the mucous membranes of the affected place is infiltrated and because of this process the fissure is becoming aim-like. The fissure can bleed and cause drastic painfulness. During the years affection of the vermilion border, the transitory zone from the skin to the mucosa (Klein's zone) is mostly injured. On the background of the swelled hyper- mucosa there are formed islets of nacreous white layers with closely attached squamae. Also in some places there are formed fissures and small erosions. During the streptococci type of the disease [lat. Angulus infectious streptococcus] (the variant of impetigo) there can be observed honeyed-yellow scabs that cant be during the candidiasis. The candidiasis of external genitals mainly develops on the ground of cutoinfections, more often from the intestine or from the affected hands, rarely it occurs as affection from sexual partners. The development of the candidiasis vulvovaginitis is furthered by pregnancy, application of steroidical contraceptive means, antibiotics, gynecologic diseases, diabetes, hypovitaminosis and etc. The candidiasis vulvovaginitis is accompanied with the feeling of intensive peeling, especially in the premenstrual period, vaginal secretions of cream-like appearance. The following inflammatory processes are observed on the vaginal mucosa and on the external genitals: hyperemia, dryness, swellings, granulation, greyish-white layers. Sometimes in

	the section of small vulvar lips (labiums) and clitoris there appear small vesicles with thick walls, after which the dotted erosions with polycyclical outlines. These candidiasis rashes on the external genitals resemble leukoplasia or vulvar hraurosis. The candidiasis balanitis and balanoposthitis in their most cases are transmitted by sexual ways and that's why they are lately considered to be relative to the group of diseases that are transmitted by sexual ways. After sexual intercourse in several hours an the prepuce and penis there appears temperate hyperemia, little papules which transformed into pustules and vesicles with further formation of dotted erosions. Later on there appear white layers of the thurus (dotted) type on the erosions. During the recuring candidiasis balanitises and balanoposthitises it is necessary to examine the patient for the presence of diabetes mellitus. The surface intertriginosal candidiasis of folds (intertrigin blastomycosis) is mainly localized in the section of neck large folds, inguinal, arm-pit and anal regions, under mammary glands, around umbilicus, in abdominal folds, parotic folds and in spaces between toes. The disease begins with small (with the size up to of a match head) vesicles and pustules rash which quickly transformed into erosions that grow along the periphery, then they are flow together with formation of polyciclical outlines. The erosion surfaces are cherry-red color and lightly humid. There can be observed fissures with white layers deep inside the folds. Sometimes around the erosions there can be noticed new small nidus covered by besides and small pustules (the so-called "sittings" or " riddling"). Among the workers of confectionary factories and conneries there can be observed the candidiasis of spaces between fingers of hands (especially often of 3 spaces between fingers) as their professional disease. The candidiasis differs from the folds affections of other etiology by dark-red coloring of the erosions surface. Its final diagnosis is made on the basis of the microscopic and cultural investigations. The candidiasis of glabrous skin develops in the result

	of spreading of the process from the folds. The following two varieties of the glabrous skin candidiasis are differentiated: the erythematic and the vesicular ones. In the first form there appear erosive sections of dark-red color with glabrous shining surface on the skin. The appearance of dispersed vesicles with pinheads size on the erythematous or erosive background is typical for the second form of the disease. The candidamycosis (candidiasis) of nail folds and plates is mainly marked in adults and very seldom in children. The disease starts with the affliction of nail folds that are smelled. become red and painful. After pressing on the back part of the nail fold there often appears a drop of pus out from it and the fold looks as if he hangs over the nail. The nail plate affection begins from the lunula and lateral edges. The nail gets brown color, begins to crumble and becomes more thin. After some time the nail-plate in the lunula section is exfoliated from the nail bed. Candidamyrida (lat.) are developed rarely and they can appear as the paraallergic reaction on antibiotics application. Morphologically they proceed in the form of erythematic or papulo-vesicular rashes. The candidiasis treatment is conducted with taking into consideration the clinical picture of the disease, its process spreading, the localization of affected places. During spreading, torpidly proceeding processes the following anti-yeast (fungal) antibiotics are prescribed - Zevorin or Nystanin, perorally in the dose of 500.000-1.000 000 Units, 4-5 times daily during 2-3 weeks with simultaneous application of B-group vitamins, ascorbic acid and Rutin. In the acute period with considerable swelling, erosions, wetting it is advisable to prescribe lotions with Alibur's solution, 2% solution of Resorcin, 1-5% solution of Tannin, solution of Aethacridin Lactate [1 1000] (lat. Aethacridini lactas) and others. After calming down of acute inflammatory processes the affected regions are painted with water or spirit solutions of anilinic yeast (2% solution of methylene blue, Gentianviolet, Kasteliani's solution). The treatment is finished with

	ointments prescribtion: Nystatinic (3.000.000 units per lgr.), Zevorinic (5.000.000 units per lgr.); Nitrofuralenic ones, etc. It's better to use such combined preparations as Triderm, Travokort, Kanesten, Ketokonazol, Micoseptin, Nitrofungin, Eccoderile. During the affection of the oral mucosa it is prescribed painting with 5-10% solution of borax and Lugol's solution. The following anticandidiasis means of the present day for intravaginal application are used for the treatment of vulvovaginitis: batriphen, hyno-dactaryn, clotrymazolo etc. The nails blastomycosis is treated in the same way as during other fungal diseases (see "Epidermophytosis of feet").