



variety of chemical structure and biological properties of the process of synthesis of macromolecules make it difficult to develop effective antiviral drugs. Much of that is used for this purpose are imported and expensive, such as oseltamivir (Tamiflu) and zanamivir. Known effective low-inducer of endogenous interferon - Amixin ("Interkhim", Russia, (Tillaron "Sigma", USA)). By chemical structure Amixin belongs to fluorene derivatives. It is used to treat viral diseases caused by viruses Herpes Simplex I-II type, cytomegalovirus and other infections. Therefore, the search for new antiviral agents among derivatives of fluorene is relevant and promising.

**Purpose** - study of anti phage activity of 32 new fluorene compounds synthesized at the Department of Pharmaceutical Chemistry LNMU.

**Materials and methods.** Anti phage effect studied on the model of staphylococcal phage - *S.aureus* 209-p. To determine the infectious titer of phage was carried out phage titration method agar layer by Gracia method.

**Results and conclusions.** When investigated fluorene derivatives was discovered anti phage effect of 4 compounds. The results of these experiments serve as a basis for further detailed study of the antiviral action of these compounds on RNA-and DNA-containing viruses.

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## **PROBLEM OF CHIKUNGUNYA IN THE MODERN PERIOD**

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**Introduction.** Chikungunya is a virus that is transmitted from human to human mainly by infected *Aedes albopictus* and *Aedes aegypti* mosquitoes acting as the disease-carrying vector. These mosquito types are characterised by white stripes on their black bodies and legs. Chikungunya fever symptoms appear suddenly, which is characterized by fever, chills, headache, nausea, vomiting, joint pains and rashes on the skin. Possible complications include gastro-intestinal complications, cardiovascular decompensation or meningo-encephalitis. Fatalities have been reported mainly in aged patients or where the patient's immune system was weakened by underlying conditions. As no vaccine or medication is currently available to prevent or cure the infection, control of Chikungunya involves vector control measures and encouraging people to avoid mosquito bites.

**Results.** Outbreaks of Chikungunya virus are usually found in: Africa, Southeast Asia, Indian subcontinent and islands in the Indian Ocean. The increasing presence of the vector in Southern continental Europe has made outbreaks of Chikungunya a new health risk in these regions. It is therefore important to provide information on how to limit the risk of mosquito bites to people living in or visiting affected areas.

**Preventive measures:** wear long-sleeved shirts and long trousers, use mosquito repellents, coils or other devices that will help fend off mosquitoes, If possible, sleep under bed nets pre-treated with insecticides, set the air-conditioning to a low temperature at night – mosquitoes do not like cold temperatures. In order to prevent further transmission, infected persons should avoid further mosquito bites.

**Conclusion.** Laboratory criteria: at least one of the following tests in the acute phase: virus isolation; presence of viral RNA by RT-PCR; presence of virus specific IgM/IgG antibodies in single serum sample collected; seroconversion to virus-specific antibodies in samples collected at least one to three weeks apart.

**Shvets O.**

### **CLINICAL CHARACTERISTICS OF IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME (IRIS) IN HIV/TB-COINFECTED PATIENTS**

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**Introduction:** Some HIV/TB-coinfected patients who are on anti-TB treatment and highly active antiretroviral therapy (HAART) will develop an exacerbation of symptoms, signs or radiological manifestations of TB that are not due to relapse or recurrence of their TB. It is so called immune reconstitution inflammatory syndrome (IRIS).

**Aim:** To analyse clinical and laboratory factors of HIV/TB-coinfected patients diagnosed with IRIS and to compare these with HIV/TB-coinfected patients who did not develop IRIS.

**Materials and methods:** We analysed 14 case histories of HIV/TB-coinfected patients who were treated in antituberculosis dispensary between 2009 and 2011. Using a set definition of the syndrome the patients were classified into two groups: the 1-t group - those who developed IRIS (5 patients) and the 2-d group- those who did not (9 patients). Demographic, clinical and laboratory data relating to both HIV and TB were compared between the two groups.

**Results:** 5 cases developed IRIS with a median (range) duration of 2.53 (0.53-14.97) months. 3 (60%) patients in the IRIS group had disseminated TB at baseline compared with 2 (22%) in the non-IRIS group ( $P = 0.05$ ). The median baseline CD4 for the IRIS group was significantly lower at 54 (11-104) cells/mm<sup>3</sup> ( $P = 0.05$ ) than the non-IRIS group at 146 (92-268) cells/mm<sup>3</sup>. A significantly greater proportion of patients in the IRIS group [4/5 (80%),  $P < 0.05$ ] had baseline CD4 < 100cells/mm<sup>3</sup> compared with the non-IRIS group [4/9 (44%)]. The median fold change in CD4 from baseline to 3 months was significantly higher in the IRIS group patients, 1.4 (0.4-5.6), compared with 0.7 (-0.2 to 1.0) for those in the non-IRIS group ( $P < 0.05$ ).

**Conclusions:** Patients who develop IRIS are more likely to present with disseminated TB, have a CD4 count < 100 cells/mm<sup>3</sup> and have a prompt rise in CD4 count in the initial 3 months of HAART.

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### **INDEXES OF BLOOD LIPID SPECTRUM IN PATIENTS WITH CHRONIC HEPATITIS C**

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**The aim** of the research is to study the state of lipid metabolism indexes in patients with chronic hepatitis C (CHC) according to sex, age, virus genotype, viral load and biochemical process activity.