

diseases and are developing as many drugs in form of semi-solid forms to help out with such problems. *Cymbopogon citratus*, Stapf (Lemon grass) is a widely used herb in tropical countries, especially in Southeast Asia. The essential oil of the plant is used in aromatherapy. The compounds identified in *Cymbopogon citratus* are mainly terpenes, alcohols, ketones, aldehyde and esters. Some of the reported phytoconstituents are essential oils that contain Citral α , Citral β , Nerol Geraniol, Citronellal, Terpinolene, Geranyl acetate, Myrcene and Terpinol Methylheptenone. The plant also contains reported phytoconstituents such as flavonoids and phenolic compounds, which consist of luteolin, isoorientin 2'-O-rhamnoside, quercetin, kaempferol and apiginin. Studies indicate that *Cymbopogon citratus* possesses various pharmacological activities such as anti-amoebic, antibacterial, antidiarrheal, antifilarial, antifungal and anti-inflammatory properties. Various other effects like antimalarial, antimutagenicity, antimycobacterial, antioxidants, hypoglycemic and neurobehaviorial have also been studied. These results are very encouraging and indicate that this herb should be studied more extensively to confirm these results and reveal other potential therapeutic effects. Due to some of these findings, lemongrass because a plant of interest for the skin diseases treatment. But there are no available semisolid preparations containing lemongrass oil. Thus the aim of our research is development of compose and technology of semisolid drug for treatment of wide range of topical diseases, containing lemongrass oil.

S-DERIVATIVES OF 5-(THEOPHYLLINE-7'-YL)-4-R-1,2,4-TRIAZOLE-3-THIOL: SYNTHESIS AND PROPERTIES

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The aim was to find promising compounds in the S-series of 4-R-5-(theophylline-7'-yl)-1,2,4-triazoles-3-thiol (R = CH₃, C₂H₅, C₆H₅). Materials and methods. As the starting material was chosen theophylline, which through a series of successive stages received 7-((3-thio-4-R-4H-1,2,4-triazoles-5-yl)methyl)-theophylline. Research of physical and chemical properties of the compounds were carried out by methods that are listed in the State Pharmacopoeia of Ukraine. The melting point was determined by an open capillary method on the device OptiMelt MPA 100. Structure substances are confirmed by elemental analysis instrument Elemental Vario EL cube (CHNS), infrared spectra (4000 - 400 cm⁻¹) were taken off modules of ALPHA-T spectrometer Bruker ALPHA FT-IR. ¹H-NMR spectra were recorded using a spectrometer "Varian Mercury 400" (solvent - DMSO-d₆, internal standard - tetramethylsilane). Chromatography-mass spectral studies were performed on the instrument Agilent 1100 Series LC/MSD System. Results and conclusions. Developed phased strategy targeted synthesis of 7-((3-thio-4-R-4H-1,2,4-triazoles-5-yl)methyl)theophylline and its derivatives. In operation, received 12 salts, 8 esters, 3 hydrazid and 8 amides 2-(5-((theophylline-7'-yl)methyl)-4-R-4H-1,2,4-triazole-3-ylthio)acetic acid. Thiol alkylation of haloalkanes and haloalcohols, synthesized 14 S-derivatives. For the synthesized compounds investigated spectral properties (UV, IR, ¹H NMR, chromatography-mass and mass spectra). The results of virtual screening (program PASS Online) identified promising areas for further biological studies of the compounds obtain.

AMINO ACID COMPOSITION OF PORTULACA OLERACEA L. AND PORTULACA GRANDIFLORA HOOK.

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It is known that aminoacids play important role in synthesis of enzymes, hormones, neurotransmitters, some elements of connective and muscular tissue, in the process of hematopoiesis. The aim of research was to determine the qualitative composition and quantitative contents of aminoacids in leaves, herbs, roots of *Portulaca oleracea* L. and *Portulaca grandiflora* Hook. Materials and methods. The determination of aminoacids was carried out by ion exchange chromatography with using automatic aminoacid analyzer AAA T-339M. Results and discussion.

According to the study, 17 aminoacids were identified. 9 of these aminoacids (arginine, valine, histidine, isoleucine, leucine, lysine, methionine, threonine and phenylalanine) are essential. The highest total content of aminoacids (24,35mg/100mg) was established in the leaves of *Portulaca oleracea* L. The lowest total content of aminoacids (11,97mg/100mg) was determined in the roots of *Portulaca grandiflora* Hook. Cysteine is found in the highest concentration in roots of *Portulaca grandiflora* Hook. Arginine, aspartic acid and lysine are found in highest concentration in roots of *Portulaca oleracea* L. Glycine, valine, alanine, serine and glutamic acid are accumulated in highest concentration in leaves of *Portulaca oleracea* L. Alanine, arginine, aspartic acid, valine, glycine and lysine were the predominant amino acids in all specimens. Conclusions. The qualitative composition and quantitative content of 17 amino acids were determined in leaves, herbs, roots of *Portulaca oleracea* L. and *Portulaca grandiflora* Hook. The highest total content of aminoacids (24.35mg/100mg) was established in the leaves of *Portulaca oleracea* L.

Researches of antioxidative activity of dietetic additive “Omega-3”

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According to recent researches, besides classic antioxidants, stockpile of which increases continuously, antioxidative and antiradical properties revealed of a numerous of physiological active substances of natural and synthetic origination. Taking into consideration diversity of positive biological effects of the antioxidants, their search and investigation remains an actual problem of the modern biochemistry and pharmacology. Especial regard deserves dietetic additives with expressed properties of the natural antioxidants, such as “OMEGA-3”. It has been proven clinically, that *w*-3-polyunsaturated fatty acids (PUFA) need for normalization of a brain activity, functions of vascular, immune and reproductive systems. But the most important features of *w*-3-PUFA are their antioxidant properties. For the researches the dietetic additive “OMEGA-3” in gelatinous capsules has been taken. The results of investigation of AOA under nonenzymatic initiation of freeradical oxidation under decreasing of marker of peroxidation of MDA have given 93,4%. The researches under inhibition of the superoxide radical in the system of autooxidation of adrenaline into adrenochrome showed, that AOA of “OMEGA-3” equals near 78% and exceeds emoxypine and thiotriazoline. It explains the ability to catch an AFO due to unsaturation. It has been shown distinct activity of “OMEGA-3” – 65,7%, under inhibition of NO-radical in the system of photoinductive autooxidation of sodium nitroprusside, which exceeds activity of reference drugs – thiotriazoline and N-AC. Braking of OMP, caused by reagent of Phenton, demonstrated high antioxidative activity of the dietetic additive “OMEGA-3” (decreasing of levels of APH – 52% and CPH – 65,1%). The results of investigation of AOA under four tests – braking of freeradical oxidation, OMP, inhibition of superoxide- and NO-radical prove, that dietetic additive “OMEGA-3” is a perspective substance with expressed antioxidative properties, which exceed thiotriazoline, emoxypine and N-AC.

SEARCH OF ANTIFUNGAL COMPOUNDS AMONG THIAZOLE AND TRIAZOLE CONTAINING XANTHINE DERIVATIVES

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Mycoses are wide spread diseases. It could be explained by increasing of resistance of micromycetes to antifungal medicines. The reason of this is a long term of usage of such drugs and similarity in their chemical structures. Thus, search of novel antifungal drugs with specific activity is rather important task for modern pharmaceutical science. Heterocycle containing compounds are very important structural units in drug discovery that showed wide spectrum of pharmacological activity including hypoglycemic, antibacterial, antifungal, anticancer, anti-inflammatory and xanthine oxidase inhibitory effects. In the same time combination of several heterocyclic systems in one molecule could improve pharmacological properties. Aim of our work was a study of antifungal properties of thiazole and triazole containing xanthine derivatives. For