ISSN 2411-0388

NATIONAL ACADEMY OF AGRARIAN SCIENCES OF UKRAINE

NATIONAL SCIENTIFIC CENTER 'INSTITUTE OF EXPERIMENTAL AND CLINICAL VETERINARY MEDICINE'

JOURNAL FOR VETERINARY MEDICINE, BIOTECHNOLOGY AND BIOSAFETY

Volume 4
Issue 3

KHARKIV
2018

EDITORS-IN-CHIEF:
Stegniy B. T., Dr. Sci. (Vet. Med.), Prof., Academician of NAAS (Ukraine)
Gerilovych A. P., Dr. Sci. (Vet. Med.), Prof., Corresponding member of NAAS (Ukraine)

EDITORIAL COUNCIL:
Bakanidze L., PhD (Biol.), Prof. (Georgia)
Beillie L., PhD, Dr. Sci. (Vet.), Prof. (United Kingdom)
Boboš S., Dr. Sci. (Vet. Med.), Prof. (Republic of Serbia)
Breslavets V. O., Dr. Sci. (Agr.), Prof. (Ukraine)
Dugan O. M., Dr. Sci. (Biol.), Prof. (Ukraine)
Imnadze P., Dr. Sci. (Med.), Prof. (Georgia)
Fedota O. M., Dr. Sci. (Biol.), Prof. (Ukraine)
Hunger-Glaser I., Dr. Sci. (Biol.) (Switzerland)
Kolybo D. V., Dr. Sci. (Biol.) (Ukraine)
Kozeretska I. A., Dr. Sci. (Biol.) (Ukraine)
Krasochko P. A., Dr. Sci. (Vet. Med., Biol.), Prof. (Republic of Belarus)
Kuzmak J., Dr. Sci. (Vet. Med.), Prof. (Republic of Poland)
Liu Y. S., Dr. Sci. (Biol.), Prof. (Republic of China)
Lymanska O. Yu., Dr. Sci. (Biol.) (Ukraine)
Mandygra M. S., Dr. Sci. (Vet. Med.), Prof., Corresponding member of NAAS (Ukraine)
Mel'nychuk S. D., Dr. Sci. (Biol.), Prof., Academician of NAAS (Ukraine)
Niemczuk K., Dr. Sci. (Vet. Med.), Prof. (Republic of Poland)
Potkonjak A., Dr. Sci. (Vet. Med.) (Republic of Serbia)
Ruban S. Yu., Dr. Sci. (Agr.), Prof., Corresponding member of NAAS (Ukraine)
Rublenko M. V., Dr. Sci. (Vet. Med.), Prof., Academician of NAAS (Ukraine)
Shalcross J., Dr. Sci. (Med.) (United Kingdom)
Sheely H., Dr. Sci. (Biol.) (United Kingdom)
Ushkalov V. O., Dr. Sci. (Vet. Med.), Prof., Corresponding member of NAAS (Ukraine)
Vilcek S., Dr. Sci. (Vet. Med.), Prof. (Slovak Republic)
Vlizlo V. V., Dr. Sci. (Vet. Med.), Prof., Academician of NAAS (Ukraine)
Whatmore A., Dr. Sci. (Vet.) (United Kingdom)
Zavgorodniy A. I., Dr. Sci. (Vet. Med.), Prof., Corresponding member of NAAS (Ukraine)
Zhegunov G. F., Dr. Sci. (Biol.), Prof. (Ukraine)
Zöller L., Dr. Sci. (Med.), Prof., Colonel (MC) (Germany)

EDITORS:
Buzun A. I., Cand. Sci. (Vet. Med.), Assoc. Prof. (Ukraine)
Obukhovska O. V., Cand. Sci. (Vet. Med.), Senior Researcher (Ukraine)
Kovalenko L. V., Cand. Sci. (Biol.), Senior Researcher (Ukraine)
Muzyka D. V., Dr. Sci. (Vet. Med.), Senior Researcher (Ukraine)
Stegniy M. Yu., Cand. Sci. (Biol.), Assoc. Prof. (Ukraine)
Bolotin V. I., Cand. Sci. (Vet. Med.), Senior Researcher (Ukraine)
Goraichuk I. V., Cand. Sci. (Biol.) (Ukraine)

Responsible Secretary: Unkovska O. M., Cand. Sci. (Agr.) (Ukraine)
Technical editor: Vovk D. V., Vovk A. D., Yankovskyi M. O.

The Journal for Veterinary Medicine, Biotechnology and Biosafety is included in the list of scientific special serial publications of Ukraine that can publish the results of Ph.D. and Dr.Habil. theses in veterinary sciences (order of the Ministry of Education and Science № 241, March 9, 2016) and biological sciences (order of the Ministry of Education and Science № 515, May 16, 2016)

Materials approved for publication and to spread via the Internet by the Scientific Council of the National Scientific Center 'Institute of Experimental and Clinical Veterinary Medicine' (protocol № 9 of 30.07.2018)

The full text of articles available at jvmbbs.kharkov.ua. JVMBBS covered in the abstract and citation databases Google Scholar (scholar.google.com), RISC (elibrary.ru) and Index Copernicus (indexcopernicus.com)

Cover photographs by NSC 'IECVM', 2018 © All rights reserved

Editorial Board Address:
NSC 'Institute of Experimental and Clinical Veterinary Medicine'
83 Pushkinska Str., Kharkiv, Ukraine, 61023
tel. +38 (057) 707-20-53, 704-10-90
E-mail: nsc.iecvm.kharkov@gmail.com, inform@vet.kharkov.ua

Certificate of state registration:
КВ № 21398-11198P of June 25, 2015

© NSC 'Institute of Experimental and Clinical Veterinary Medicine', 2018