

ISSN 2710-3056

Grail of Science

Periodical scientific journal

No 12-13 April 2022

The issue of journal contains

Proceedings of the III Correspondence
International Scientific and Practical Conference

AN INTEGRATED APPROACH TO SCIENCE MODERNIZATION: METHODS, MODELS AND MULTIDISCIPLINARITY

held on April 29th, 2022 by

NGO European Scientific Platform (Vinnytsia, Ukraine)
LLC International Centre Corporate Management (Vienna, Austria)



OUCI
Open Ukrainian Citation Index



Euro Science Certificate № 22365
dated 20.03.2022

INDEX  COPERNICUS
INTERNATIONAL

INTERNATIONAL SCIENTIFIC JOURNAL

GRAIL OF SCIENCE

№ **12-13** April, 2022
with the proceedings of the:

III Correspondence International Scientific and Practical Conference

AN INTEGRATED APPROACH TO SCIENCE MODERNIZATION: METHODS, MODELS AND MULTIDISCIPLINARITY

held on April 29th, 2022 by

NGO European Scientific Platform (Vinnytsia, Ukraine)

LLC International Centre Corporate Management (Vienna, Austria)



EUROPEAN
SCIENTIFIC
PLATFORM



International Centre
Corporate Management

Міжнародний науковий журнал «Грааль науки»

№ 12-13 (Квітень, 2022) : за матеріалами III Міжнародної науково-практичної конференції «An integrated approach to science modernization: methods, models and multidisciplinary», що проводилася 29 квітня 2022 року ГО «Європейська наукова платформа» (Вінниця, Україна) та ТОВ «International Centre Corporate Management» (Відень, Австрія).



Editor in chief: Mariia Holdenblat

Deputy Chairman of the Organizing Committee: Rachael Aparo

Responsible for e-layout: Tatiana Bilous

Responsible designer: Nadiia Kazmina

Responsible proofreader: Hryhorii Dudnyk

International Editorial Board:

Alona Tanasiichuk - D.Sc. (Economics), Associate professor (Ukraine)
Marko Timchev - D.Sc. (Economics), Associate professor (Republic of Bulgaria)
Nina Korbozerova - D.Sc. (Philology), Professor (Ukraine)
Yuliia Voskoboinikova - D.Sc. (Arts) (Ukraine)
Svitlana Boiko - Ph.D. (Economics), Associate professor (Ukraine)
Volodymyr Zanova - Ph.D. (Economics), Associate professor (Ukraine)
Iryna Markovych - Ph.D. (Economics), Associate professor (Ukraine)
Nataliia Mykhalitska - Ph.D. (Public Administration), Associate professor (Ukraine)
Anton Kozma - Ph.D. (Chemistry) (Ukraine)
Dmytro Lysenko - Ph.D. (Medicine), Associate professor (Ukraine)
Yuriy Polyzhayev - Ph.D. (Social Communications), Associate professor (Ukraine)
Alla Kulichenko - D.Sc. (Pedagogy), Associate professor (Ukraine)
Taras Furman - Ph.D. (Pedagogy), Associate professor (Ukraine)
Mariana Vereskliia - Ph.D. (Pedagogy), Associate professor (Ukraine)
Siarhei Rybak - Ph.D. (Law), Associate professor (Republic of Belarus)
Anatolii Kornus - Ph.D. (Geography), Associate professor (Ukraine)
Tetiana Luhova - Ph.D. (Arts), Associate professor (Ukraine)



The conference is included in the catalog of International Scientific Conferences; approved by ResearchBib and certified by Euro Science Certification Group (Certificate № 22365 dated March 20th, 2022).

Conference proceedings are publicly available under terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0).

The journal is included in the international catalogs of scientific publications and science-based databases: Index Copernicus, CrossRef, Google Scholar and OUCI.



Conference proceedings are indexed in ICI (World of Papers), CrossRef, OUCI, Google Scholar, ResearchGate, ORCID and OpenAIRE.

Свідоцтво про державну
реєстрацію друкованого ЗМІ:
КВ 24638-14578ПР, від 04.11.2020

Certificate of state
registration of mass media:
КВ 24638-14578ПР of 04.11.2020



ISBN 979-8-88526-803-5

© Authors of articles, 2022
© NGO «European Scientific Platform», 2022
© LLC «International Centre Corporate Management», 2022

PECULIARITIES OF COVID-19 SUSCEPTIBILITY IN WOMEN WITH POLYCYSTIC OVARY SYNDROME Research group: Semenyna H., Fartushok T., Kutna N., Rumar V.	624
THE INFLUENCE OF NUTRITIONAL SECURITY DURING PREGNANCY ON THE PECULIARITIES OF PREGNANCY, DELIVERY AND POSTPARTUM PERIOD Research group: Semenyna H., Fartushok T., Alleva K., Tsap M.	628
ОСОБЛИВОСТІ АНАБОЛІЧНО-КАТАБОЛІЧНОГО БАЛАНСУ В ЧОЛОВІКІВ І ЖІНОК ІЗ ЦУКРОВИМ ДІАБЕТОМ 2 ТИПУ ЗАЛЕЖНО ВІД ГОРМОНАЛЬНО-МЕТАБОЛІЧНОГО ФЕНОТИПУ Науково-дослідна група: Прибила О.В., Зінич О.В., Корпачев В.В., Ковальчук А.В., Кушнарєва Н.М. ..	632
ОСОБЛИВОСТІ ЧАСТОТИ ВИПАДКІВ НАЯВНОСТІ ЛАБОРАТОРНИХ СИНДРОМІВ ЦИТОЛІЗУ, ХОЛЕСТАЗУ І ЇХ КОНСТЕЛЯЦІЙ У ХВОРИХ НА ЦИРОЗ ПЕЧІНКИ З ОСТЕОПОРОЗОМ, СТОХАСТИЧНОГО ЗВ'ЯЗКУ МІЖ ОЗНАКОЮ І ХВОРОБОЮ Абрагамович О.О., Дробінська Н.В.	637
ПЕРСПЕКТИВЫ И ЗАДАЧИ ЛЕГОЧНОЙ РЕАБИЛИТАЦИИ ПРИ ХРОНИЧЕСКОЙ ОБСТРУКТИВНОЙ БОЛЕЗНИ ЛЕГКИХ Яковлева О.А., Дорошкевич И.А., Гойна-Кардасевич О.Ю.	641
РЕЗУЛЬТАТИ ВЕДЕННЯ ВАГІТНИХ З COVID-19: НАСЛІДКИ ДЛЯ МАТЕРІ ТА НОВОНАРОДЖЕНИХ Науково-дослідна група: Фартушок Т.В., Фартушок Н.В., Флуд В.В., Козловська Х.Ю.	649
ТЕЗИ ДОПОВІДЕЙ	
ANALYSIS OF METHODS OF DRUG ADMINISTRATION IN LABORATORY ANIMALS Semenov K.A., Stepchenko L.M., Semenov D.K.	656
CONJUGATED TREATMENT OF ACUTE PURULENT CHOLANGITIS IN ADULTS FROM 26 TO 80 Ibragimov S.U.	658
ENTERAL NUTRITION IN PATIENTS WITH SEVERE ACUTE PANCREATITIS Kolosovych I.V., Hanol I.V.	660
FEATURES OF VESTIBULAR MIGRAINE DIAGNOSIS Borshchova Z., Pomazanov D.	662
АНТИСЕПТИЧНА ОБРОБКА ПАРОДОНТАЛЬНИХ ТКАНИН З ВИКОРИСТАННЯМ ВОДНО-АЕРОЗОЛЬНОЇ СУМІШІ ОЗОНОВАНОЇ ТИТАНІЗОВАНОЇ ДИСТИЛЬОВАНОЇ ВОДИ Олійник А., Лука М.	665

DOI 10.36074/grail-of-science.29.04.2022.116

ANALYSIS OF METHODS OF DRUG ADMINISTRATION IN LABORATORY ANIMALS

Semenov K. A.

Candidate of Medical Sciences

*Dnipro State Medical University of the Ministry of Health of Ukraine,
Department of Dentistry, Faculty of Postgraduate Education, Kryvyi Rih, Ukraine*

Stepchenko L. M.

Candidate of Biology, prof.

Dnipro State Agrarian and Economic University, Dnipro, Ukraine

Semenov D. K.

Dnipro State Agrarian and Economic University, Dnipro, Ukraine

Pharmaceutical forms containing glycosamines and chondroitins in their composition stimulate the synthesis of articular proteoglycans. In addition, glucosamine exhibits anti-inflammatory properties, slows down the degradation of articular cartilage, mainly due to its metabolic activity, the ability to inhibit the activity of interleukin (IL)-1, lysosomal enzymes, collagenase and phospholipase A2. The effect of treatment with glucosamine sulfate is noticeable after 2 weeks from the start of treatment. The question remains how and in what sequence to use chondroprotective drugs to normalize the work of joint structures.

The material of the experimental study was 25 sexually mature mongrel eight-month-old male rats. Before the experiment, the animals were divided into 5 groups of five in each group. The left knee joint was selected for experimental observation.

The rats of the first group received intramuscularly injections of Sinarta. The calculation of the amount of the administered substance was carried out taking into account the average weight of the animals. The average weight of the animals was 250 g. The drug was administered every alternate day, as recommended by the instructions for use of this drug. The entire course consisted of 10 injections.

In addition, Chondroxide gel was applied to the joint of the animals of this group over the period of 20 days.

The rats of the second group received intramuscular injections of Sinarta and electrophoresis with Chondroxide gel on the knee joint every other day. Electrophoresis was carried out as follows: Chondroxide gel was applied to a shaved knee joint; active electrodes were installed parallel to each other (this condition was mandatory so that the active substance penetrated into the structures of the joint as deep as possible). The passive electrode was placed on the shaved part of the spinal and caudal region. Electrophoresis was carried out for 7 minutes, with a

current of 0.5 A, 10 sessions.

The third group received only intramuscular injections of Sinarta according to the same scheme as in the first and second groups.

The fourth group received only application of Chondroxide gel to the knee joint for 20 days twice a day, as recommended by the instructions for the use of this drug.

The fifth group of animals was the control group and was kept under normal standard conditions.

After 21 days, the rats were withdrawn from the experiment. The slaughter of animals was carried out by decapitation under ether anesthesia in accordance with "Methodological recommendations for the withdrawal of animals from the experiment". After removing the animals from the experiment, the knee joint, on which therapeutic measures were carried out, was isolated and in groups No. 3 and No. 5, the left knee joint was isolated, as stipulated above.

Based on the analysis of the results of the study, the maximum optical density of the studied supernatant of the homogenates of the knee joints in the first and second groups was: 0.027 ± 0.0008 and 0.026 ± 0.004 respectively. These groups received parenteral administration of Sinarta, additional application of Chondroxide gel in the first group, and electrophoresis with Chondroxide gel in the second group.

The third and fourth groups, which received only the intramuscular administration of Sinarta and only the application of Chondroxide gel to the knee joint, respectively, showed an increase in the optical density of the supernatant of homogenates of knee joint in relation to the control group and a slight increase in relation to the first and second groups. The numerical values were distributed as follows: the third group 0.023 ± 0.0009 , the fourth group 0.022 ± 0.0004 , the fifth group - the control group 0.021 ± 0.001 (optical density units).

The reliability of differences in indicators $P \leq 0.05$ between the first two groups was obtained when compared with the third, fourth and fifth groups, respectively. Between the first and second groups, as well as between the third and fourth groups, no significant differences in $P \geq 0.05$ were found. The reliability of the differences in the indicators between the first two groups with the indicators of the third and fourth groups shows the effectiveness of the combined method of using chondroprotective drugs.

In this study, the causes of the development of joint diseases and the component of pathogenesis, which must be affected by the combined method of administration of chondroprotectors, were taken into account.

1. The most effective way to accumulate glucosamines in the joint structures is a combination of intramuscular administration of the drug and local administration by application or electrophoresis.

2. Digital values of the optical density of joint homogenates indicate the effectiveness of the cumulative method of administration of glucosamines and chondroitin sulfates into the structures of the joint.

3. Significant differences were obtained when using different methods of administration of drugs with a chondroprotective effect on joint structures.

The scientific periodical

GRAIL OF SCIENCE

№ 12-13 (April, 2022)

with the proceedings of the
III Correspondence International Scientific and
Practical Conference «An integrated approach to
science modernization: methods, models and
multidisciplinarity» held on April 29th, 2022
by NGO European Scientific Platform (Vinnytsia,
Ukraine) and LLC International Centre
Corporative Management (Vienna, Austria).

Journal's frequency: monthly

*All materials are reviewed. The editorial office did not
always agree with the position of authors. Authors are
responsible for the accuracy of the material.*

Contacts of the editorial offices:

1. 21037, Ukraine, Vinnytsia, Zodchykh str. 18, office 81;
NGO «European Scientific Platform» **Owner of the journal**
Tel.: +38 098 1948380; +38 098 1956755
E-mail: info@ukrlogos.in.ua
Certificate of the subject of the
publishing business: ДК № 7172 of 21.10.2020.
2. 1110, Österreich, Wien, Simmeringer Hauptstraße 24;
LLC «International Centre Corporative Management»
E-mail: rachael.a@iccm.org

Signed for publication 29.04.2022.
Format 60×84/16. Offset paper.
Arial & Open Sans typefaces.
Digital printing. Circulation of 100 copies.
Conventionally printed sheets 46,04.

Order № 27358.

Printed from the finished original layout.

Publisher [printed copies]:
Sole proprietorship - Gulyaeva V.M.
08700, Ukraine, Obukhiv, Malyshka str. 5.
E-mail: 5894939@gmail.com
Certificate of the subject of the publishing
business: ДК № 6205 of 30.05.2018.

Наукове періодичне видання

ГРААЛЬ НАУКИ

№ 12-13 (квітень, 2022)

за матеріалами III Міжнародної науково-
практичної конференції «An integrated approach
to science modernization: methods, models
and multidisciplinarity», що проводилася
29 квітня 2022 року ГО «Європейська
наукова платформа» (Вінниця, Україна) та
ТОВ «International Centre Corporative
Management» (Відень, Австрія).

Щомісячне видання

*Всі матеріали пройшли рецензування.
Редакція не завжди поділяє позицію авторів. За точність
викладеного матеріалу відповідальність несуть автори.*

Контактна інформація редакції:

1. 21037, Україна, м. Вінниця, вул. Зодчих, 18/81;
ГО «Європейська наукова платформа» **Власник журналу**
Тел.: +38 098 1948380; +38 098 1956755
E-mail: info@ukrlogos.in.ua
Свідчення суб'єкта видавничої
справи: ДК № 7172 від 21.10.2020.
2. 1110, Österreich, Wien, Simmeringer Hauptstraße 24;
LLC «International Centre Corporative Management»
E-mail: rachael.a@iccm.org

Підписано до друку 29.04.2022.
Формат 60×84/16. Папір офсетний.
Гарнітура Arial & Open Sans.
Цифровий друк. Тираж: 100 примірників.
Умовно-друк. арк. 46,04.

Замовлення № 27358.

Віддруковано з готового оригінал-макету.

Виготовлювач [друкованої продукції]:
Друкарня ФОП Гуляєва В.М.
08700, Україна, м. Обухів, вул. Малишка, 5.
E-mail: 5894939@gmail.com
Свідчення суб'єкта видавничої
справи: ДК № 6205 of 30.05.2018.