

РЕЗЮМЕТА
НА НАУЧНИТЕ ТРУДОВЕ
НА ДОЦ. ДОБРИ ЛАЗАРОВ ИВАНОВ, Д.Б.
ПРЕДСТАВЕНИ ЗА УЧАСТИЕ В КОНКУРСА ЗА „ПРОФЕСОР“
по 4.3. БИОЛОГИЧЕСКИ НАУКИ (БИОЛОГИЯ – МЕДИЦИНСКА БИОЛОГИЯ И БОТАНИКА),
ОБЯВЕН В ДВ БРОЙ 36 ОТ 27.04.2018 Г.

1. Павлов, Д., Нашар, М., **Иванов**, Д., Иванова, Д. 2012. In vitro антиоксидантни свойства на извлекци от смрадлика (*Cotinus coggygria*). Известия на съюза на учените - Варна 1'2012 / ТОМ XVII: 72-76.

Abstract:

The Eurasian smoke tree (*Cotinus coggygria* Scop., Anacardiaceae) is used by the Balkan folk medicine for its antiseptic and antimicrobial properties as well as for treatment of gingival and throat inflammations. Although that aqueous infusion from *C. coggygria* leaves has been applied mainly externally because of the large gallotannins content, there are few reports for an internal use of these infusions against gastric ulcer and diarrhea. *Cotinus coggygria* is considered to be a poisonous plant; however, there are data from traditional folk medicine indicating an internal use of ethanol infusions from wood, as well. Aqueous and ethanol infusions from *Cotinus coggygria* leaves and wood were screened in vitro for antioxidant activity and phenolic compounds content. The aqueous infusions were prepared as herbal teas following the common use. The ethanol infusion was prepared following the traditional recipe for dyeing of high alcoholic beverages in Bulgaria. The present study confirms the high phenolic content and antioxidant potential of leaves from *C. coggygria* and may help in the identification of the medicinal plants that could contribute to sustain antioxidant status and protect against free radical damage. The high polyphenol content and anti-oxidant capacity of the 40% ethanol infusion is reported for the first time. It provides useful information for the development of safe food products and additives with appropriate antioxidant properties. This allows carrying out further investigation on biological effects of *C. coggygria* in vivo.

2. Pasheva, M., Nashar, M., Pavlov, D., Slavova, S., **Ivanov**, D., Ivanova D. 2013. Antioxidant capacity of different woods traditionally used for coloring hard alcoholic beverages in Bulgaria Science & Technologies V. III, N 1, Medicine: 123-127

Abstract:

Introduction: According the folk traditions in Bulgaria for hard alcoholic beverages processing, *Quercus robur* L., *Morus nigra* L., *Robinia pseudoacacia* L., and *Cotinus coggygria* Scop. are the most popular species for manufacturing of wood barrels for storage and ageing, as well as for additionally coloring of drinks. The wood improves organoleptic characteristics by giving a specific taste, flavor and color to beverages. Popular beliefs suggest that colored drinks in small quantities could possess certain health beneficial effects (e.g. against gastric ulcer and diarrhea), probably due to the plant constituents extracted during ageing and coloration.

Methods: 40% aqueous-ethanol extracts were prepared based on traditional recipes for hard alcoholic drinks coloration. Antioxidant capacity and total polyphenol content of the extracts were measured and compared in a time course.

Results: The highest polyphenol content and antioxidant activity were estimated for *M. nigra* heartwood extract. High positive correlation between polyphenol content and antioxidant activity was calculated for all extracts studied.

Conclusions: The results suggest that polyphenol content significantly contributes to antioxidant activity of all studied extracts. The heartwood extract from *M. nigra*, identified to possess highest total polyphenol content and antioxidant activity, will be further investigated for cytotoxicity as well as for biological effects in different *in vivo* models.

3. Ингилизова Г, Д. **Иванов**, Е. Ковачев, М. Еврев, И. Костов, В. Нечева: Качеството на яйцеклетките като прогностичен маркер за оценка на резултата от IVF/ICSI процедура. Акушерство и гинекология, 2014, 53 (6), 41-46.

Резюме:

Технологията на ин витро оплождането се състои основно в добиване, селекция и инсеминиране на яйцеклетки, отглеждане на ембриони и трансферирането им в матката на реципиента. Преди да се пристъпи към каквито и да било манипулации с овоцитите, качеството им трябва да бъде прецизно оценено, тъй като то оказва директно влияние върху моноспермалното оплождане, ранното ембрионално развитие, постигането и подържането на бременност. Критериите, които се прилагат за оценка на качеството на яйцеклетките се подразделят на морфологични, клетъчни и молекулярни. Морфологичните включват структурата на яйцеклетката: кумулулно-овоцитен комплекс, цитоплазма, първо полярно телце, перивителинно пространство, zona pellucida и делителното вретено. Морфологичните изменения може да са свързани с конкретния пациент и особеностите на цикъла на лечение, да засягат повечето или всички яйцеклетки от кохортата. Целта на настоящия обзор е обобщавайки наличните данни от литературата да проучи дали неинвазивното изследване на даден морфологичен параметър или група от параметри на човешките яйцеклетки на стадий МII има ясна прогностична стойност за последващото развитие и крайния резултат на ин витро процедурата.

Abstract

4. Ингилизова Г., Д. **Иванов**, Е. Ковачев, И. Костов, С. Иванов: Морфологични особености на яйцеклетките при пациентки с намален яйчников резерв: проучване върху 72 цикъла на лечение чрез IVF/ICSI. Варненски медицински форум 2015, (4) 2: 19–25.

Резюме:

Настоящото проучване представя резултатите от ретроспективно и проспективно проследяване на морфологичните особености на яйцеклетките в зависимост от възрастта и хормоналния статус при пациентки с намален яйчников резерв. Материали и методи: Изследването включва 3038 яйцеклетки, произхождащи от 419 пациентки, участвали в програма за лечение на безплодието чрез оплождане ин

витро от м. февруари, 2011 г. до м. февруари, 2014 г., 72 от които с намален овариален резерв и 347 – с нормален. Резултати: Пациентките с намален и нормален овариален резерв показаха статистически значима разлика по отношение на морфологията на яйцеклетките. При пациентките с незадоволителен овариален отговор се наблюдава умерена статистически значима отрицателна линейна зависимост между възрастта и морфологията на яйцеклетките. Резултатите ни показват тенденция към намаляване на процента яйцеклетки с нормална морфология и увеличаване на процентите яйцеклетки с дефекти с понижаване на стойностите на антимюлеровия хормон (AMH) и повишаване на базалните стойности на фоликулостимулиращия хормон (FSH). **Заключение:** Морфологичните характеристики на яйцеклетките при пациентките с намален яйчников резерв се 15 mIU/ml.

5. **Ivanov D.** Book review: Ettl H. & Gärtner G. 2014. Syllabus der Boden-, Luft- und Flechtenalgen. 2 Auflage. Springer Spektrum, New York, 773 pp. Ann Sof Univ, Book 2-Botany, V. 99, 2016: 122

Book review: Stoyneva-Gärtner M. P. & B. A. Uzunov 2017.
Bases of the Systematics of Algae and Fungi. Publ. House "Dzhey
 Ey Em Dzhi", Sofia, 189 pp. (In Bulgarian)



The book under review presents a new textbook for all students of biology, issued for different bachelor courses within the field (such as Systematics of Algae and Fungi, Biodiversity of Algae and Fungi, Structure and Biodiversity of Algae and Fungi, General Botany or Botany – part Algae and Fungi, Pharmaceutical Botany – part Algae and Fungi, Algae and Fungi as Economic Resources, *etc.*). The book was intended to serve as a guideline in studying of the two distinct groups of Algae and Fungi. It combines traditional knowledge on their morphology, cytology, reproduction and ecology with modern data and recent classification systems based on ultrastructural data and molecular-genetical studies. It is obvious that the concise title of

any students' handbook cannot reflect fully the diversity of taxonomic views on the organisms under consideration. Therefore, it is important to point out that the present guide contains a special chapter, in which the peculiarities of both groups are outlined. This chapter, in a brief, but consistent manner, follows the changing views on the position of Algae and Fungi in different systems of the organic world, starting with the simple division in Plants and Animals and ending with the various multikingdom systems, proposed nowadays on the basis of different taxonomic features and approaches. The colorful summarizing table of these main systems and chosen examples is invaluable for students to navigate throughout this diversity of views, opinions and constant changes. In this regard, it is necessary to highlight the usefulness of the provided historical information on the most influential authors and books, and of the added index of the original names of the authors and their Bulgarian equivalents.

6. Ингилизова Г., Е. Ковачев, Д. Иванов, И. Костов, С. Иванов: Влияние на стимулационния протокол върху зрелостта и морфологичните особености на яйцеклетките при пациентки с намален яйчников резерв: проучване върху 72 цикъла на лечение чрез IVF/ICSI. Акушерство и гинекология, 2016, 55 (3), 10-13.

Резюме:

Настоящото проучване представя резултатите от ретроспективно и проспективно проследяване на зрелостта и морфологичните особености на яйцеклетките и влиянието, което оказват върху тях терапевтичният подход и протоколът за контролирана овариална хиперстимулация (КОХ) при пациентки с намален яйчников резерв. Материали и методи: Изследването включва 184 яйцеклетки, произхождащи от 72 пациентки с намален яйчников резерв, участвали в програма за лечение на безплодието чрез оплождане ин витро от м. февруари, 2011г. до м. февруари, 2014г. Използваните терапевтични подходи и протоколи за КОХ са със протокол с микродоза агонист, със протокол с антагонист, протокол с мека стимулация и ин витро оплождане на спонтанен цикъл. **Резултати:** Проучването ни не установи статистически значима зависимост между приложения протокол за яйчничова стимулация и зрелостта и морфологията на аспирираните яйцеклетки. **Заключение:** При пациентките с намален овариален резерв, най-добро качество показват яйцеклетките получени след КОХ с ниски дози на използваните гонадотропни хормони.

7. Marinov P, Zlateva S, Bonchev G, **Ivanov D**, Georgiev K, Sabeva Y, Yovcheva M. Acute poisoning with benzodiazepines and other hypnotics: etiologic cause, sex/age distribution and clinical outcome. J of IMAB. 2016 Oct-Dec;22(4):1371-1374. DOI: <https://doi.org/10.5272/jimab.2016224.1371>

Abstract:

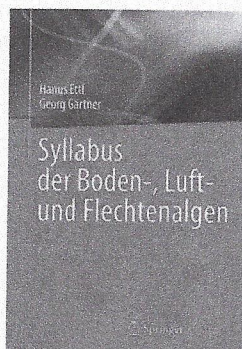
Purpose: Poisoning with drugs occupies a leading position among the causes of acute intoxications. Etiological distribution of medicated poisoning in different countries, even if they are adjacent, is different. In the most studies, it was reported that the highest incidence of poisoning is with benzodiazepines or other psychoactive drugs. A retrospective analysis of acute poisoning with benzodiazepines and other hypnotic drugs in the Varna region for 25 years period – from 1991 to 2015 was carried out.

Material and Methods: The number of patients who received hospital treatment after poisoning with benzodiazepines is 1741, and those with other hypnotics is 293, representing respectively 26.37% and 4.44% of all drug intoxications.

Results: The share of poisoning with benzodiazepines and hypnotics compared to all acute intoxications is 11.66%. They are more common in women – 1566 (77%). Men are 468 (23%), the ratio of men to women was 3.34:1. The largest number of intoxications is in the age group up to 24 years - 1123 (55.2%), and only 4.1% of patients over 60 years. Intentional suicide attempts are 1896 (93.2%). Death is registered in 8 (0.4%) patients.

8. **Ivanov D**. Book review: Stoyneva-Gärtner M. P. & B. A. Uzunov 2017. Bases of the Systematics of Algae and Fungi. Ann Sof Univ, Book 2-Botany, V.101, 2017: 126-127.

Book review: Ettl H. & Gärtner G. 2014. Syllabus der Boden-, Luft- und Flechtenalgen. 2 Auflage. Springer Spektrum, New York, 773 pp.



Recently we often speak about the “craft of scientific writing” and many books, lectures and internet sites provide significant and interesting guides on the topic. One of them suggests the following to those, who want to write a book review, or book report: “Try to appreciate the book: It will teach you something if you are open to learning.” (<http://www.wikihow.com/Write-a-Book-Report>, accessed 24.10.2014). The book, which is the focus of this brief review, is easy to be appreciated. In fact, there is no other way to accept it, since it is the most profoundly presented collection of aero-terrestrial eukaryotic algae of the Earth, including lichen photobionts. Nowadays, when so-called “classical” phycology, based

mostly on algal morphology, cytology, reproduction and ecology, is generally considered obsolete, but still could not be fully and sufficiently replaced by “modern” studies alone, books like this one are strongly needed. The explanation is easy – it provides a reasonable bridge between these two lines in algal knowledge, linking, as far as it is possible, the classical system with recent molecular phylogenetic results, still keeping strong point of support on use of living cultures and proper terminology. Appreciation to this book comes also from the fact, that Univ. Prof. DrSc Georg Gärtner – the co-author, who updated it and prepared this second edition, fully kept the structure, keys, texts and figures of the first edition, and, following the model of classical algal flora of Pierre Bourrelly (1968–1972), made an appendix with recent data on transformed or newly described taxa, as well as on newly recorded for aero-terrestrial habitats species with relevant references. In this way, it introduces the recent knowledge, but in the same time gives a possibility to young users to become acquaint with this well-known and widely used Syllabus, commonly smilingly named “*Ettl & Gärtner 1995*”. The positive criticism, which has a purpose to increase the use of this book, could be expressed in two wishes: to see it as soon as possible translated in English language and to see it enlarged with data on cyanoprokaryotes, which are quite common and abundant aero-terrestrial inhabitants. But even in German language, the recently published second edition of Syllabus is of inestimable value for all those, who are open to learning.

Dobri Ivanov

122

9. Marinov P, Zlateva S, Bonchev G, Ivanov D, Yovcheva M, Georgiev K. Acute methanol intoxications – a challenge for clinical toxicology. J of IMAB. 2016 Oct-Dec;22(4):1352-1354. DOI: <http://dx.doi.org/10.5272/jimab.2016224.1352>

Abstract:

Purpose: Methanol (CH₃OH) is a monohydric alcohol, vastly used both in housekeeping and industry. Although the acute methanol intoxications are rare, they may include life-threatening symptoms, substantial lethality and negative consequences such as neurological disorders and vision damage. Aim of the work is to conduct a retrospective study on the acute methanol intoxications within Varna region for a 10-year period (2006-2015).

Material/Methods: This study covers 39 patients of the Clinic for Intensive Treatment of Acute Intoxications and Toxicallergies at Naval Hospital – Varna, all of which had their diagnosis confirmed, including gas chromatography methods.

Results: Methanol intoxication prevalence showed male/female ratio close to 2.9:1. The major part of the cases concerned economically active population, the age group of 25-60 being the most affected. In all instances an oral methanol intake has been involved. Death occurred in 14 cases (35.9%).

10. Zlateva S, Marinov P, Yovcheva M, Bonchev G, Ivanov D, Georgiev K. Ciguatera poisoning: Pacific disease, foodborne poisoning from fish in warm seas and oceans. Review. J of IMAB. 2017 Jan-Mar;23(1):1474- 1479. DOI: <https://doi.org/10.5272/jimab.2017231.1474>

Abstract:

Purpose: The review is provoked because of lack of awareness of the medical practitioners in Bulgaria concerning of the ethnology, pathogenesis, clinical symptoms and treatment of the ciguatera fish poisoning (CFP). This can be a source of prolonged diagnostic delays, as some cases reporting in another country in Europe, for example Germany, Spain and UK. Varna is the sea town with many sailor crews returning from tropical and subtropical regions, or CFP can affect people who travel to the Pacific and Caribbean or ate exotic fish from supermarket. The information of this fish food-borne poisoning is part of student's education in discipline "Marine medicine" in Medical University, Varna.

Materials and methods: To present better information from different authors and last scientific data, we made review of published materials of 58 issues to construct definition, history, etiology, pathogenesis (toxins and mechanisms of action), clinical symptoms, treatment and prevention of the Ciguatera or ichthyosarcototoxicosis, a wide spread food-born poisoning.

Results: Ciguatera poisoning is ichthyosarcototoxicosis, a wide-spread foodborne poisoning in people after consumption of flesh of different kinds of fishes in which toxins produced by poisonous microorganisms (Dinoflagellates) have accumulated. The poisoning develops by accumulating toxins higher up the food chain starting with toxin producing dinoflagellates (species: *Gambierdiscus toxicus*, *Prorocentrum concavum*, *Pr. lima*, *Ostreopsis lenticularis*, *Ostr. Siamensis* and others), continuing with the poisoned algae (species: *Portieria*, *Halymenia*, *Turbinaria*, *Sargassum*), and after that involving small crustacea and small fishes to greater fishes (vector fishes, genus *Herbivores* and *Carnivores*), in which the toxins have been stored in amount, great enough to cause foodborne poisoning in humans. This poisoning is widespread in tropical and subtropical regions, but because of its delayed toxic effects, lasting for months and years, there is a possibility that every medic can encounter its unusual symptoms, requiring specific treatment. The following toxins cause the poisoning: ciguatoxin, meitotoxin, ostreotoxin, domoic acid and some other unspecified toxins. They are lipid soluble, thermo stable and cannot be decomposed by culinary processing. These toxins have neurotoxic, cardiotoxic, hemolytic properties and cause diarrheic syndrome. Clinical presentation is characterized by average latent period of 12 hours after the consummation, vomiting and diarrhea next 24 hours and neurological symptoms that appear at the beginning of the poisoning with paresthesias along the body, changing feeling of hot and cold, strong myalgia. Disturbances in cardiac rhythm and conduction, strong dehydration or shock are possible

in severe cases. Light cases pass over in several days, but more often the poisoning has a chronic course – from 3-4 months to 1 year, with prevalence of neurologic symptoms: myalgia, paresthesias, skin itching with scratches, depression. The management is not specific and includes stomach lavage with activated charcoal, fluids replacement during the first 24 hours, corticosteroids, antiallergics, high doses of vitamins from group B (Vit. B1, Vit. B6, Vit. B12), mannitol IV, nootropic medicaments, antidepressants and other symptomatic medicaments. The prophylaxis is done by examining every fish with specific test for detecting ciguateratoxin.

11. Marinov P, Zlateva S, Bonchev G, **Ivanov D**, Georgiev K, Sabeva Y, Yovcheva M. Acute narcotic drug intoxications: etiology, sex/age distribution and clinical outcome. J of IMAB. 2017 Jan-Mar; 23(1):1444-1446. DOI: <https://doi.org/10.5272/jimab.2017231.1444>

Abstract:

Purpose: Poisoning with drugs is a serious medical and social problem worldwide. Retrospective analysis of acute poisoning with narcotic drugs had been performed in Varna region for 25 years (1991-2015).

Material and Methods: The number of patients received hospital treatment after poisonings with narcotic substances was 677, which represented 3.9% of all acute exogenous intoxications.

Results: Narcotic poisonings were more common in men – 546 (80.6%), than in women – 131 (19.4 %). The ratio male/ female was 4.17:1. The largest number of intoxications were in the age group up to 24 years – 1123 (66%), and only 2.65% of patients were over 45 years. Death was registered in 6 (0.9%) patients.

12. Marinov P, Zlateva S, **Ivanov D**, Bonchev G, Sabeva Y, Georgiev K, Vazharov I. Clinical criteria for the outcome forecast of acute exogenous intoxication with organophosphorus pesticides. J of IMAB. 2017 Apr- Jun;23(2):1541-1545. DOI: <https://doi.org/10.5272/jimab.2017232.1541>

Abstract:

Purpose: The wide-spread use of organophosphorus pesticides (OPP) and their substantial toxicity determine the high frequency of poisoning with them. Despite the modern treatment methods, the acute exogenous intoxications (AEI) continue to exhibit high lethality and are the source of one of the most serious problems in the clinical toxicology. A number of not commonly accepted criteria have been suggested to estimate the gravity of the organophosphorous intoxication. Until now no system of clinical criteria exists that would forecast the outcome of this type of acute poisoning. The aim of this study is to develop an outcome forecast of AEI with OPP with the help of basic clinical criteria.

Materials and Methods: The subjects of the study are 160 patients. We explore the significance of five of the most typical clinical indicators of the acute poisoning with OPP for the outcome of the intoxication and the need of artificial pulmonary ventilation, with the aid of discriminatory statistical analysis. The selected indicators form a discriminatory model with automatically built discrimination function.

Results: The obtained classification coefficients allow us to construct a forecast matrix containing score estimates designed for practical applications.

13. Marinov, P., Zlateva, S., **Ivanov, D.**, Bonchev, G., Sabeva, Y., Georgiev, K., Vazharov, I. 2017. Acute exogenous intoxications with organophosphorus pesticides: duration of the hospital treatment and clinical criteria for prognosis. J of IMAB. 2017 Apr-Jun; 23(2) :1575-1578.

Abstract:

Purpose: Several criteria have been suggested to estimate the intoxication severity, yet so far no system of clinical criteria has been developed to determine the duration of hospitalisation. The forecast is linked to the influence of the extended corrected QT interval and GCS (Glasgow Coma Scale) on the frequency of the developing acute pulmonary insufficiency and lethality. The average duration of hospital treatment is also crucial. First of all, it is determined by the intoxication severity and lasts from 3 to 26 days. The aim of this study is to develop an individual forecast about the duration of hospitalisation for patients suffering from acute exogenous intoxication with organophosphorus pesticides (OPP).

Materials/Methods: The subjects are 160 patients. We use statistical regression analysis to study the significance of 5 of the most typical clinical indicators of organophosphorus intoxication on the duration of hospitalisation: type of conscience, presence of spasms, pulmonary oedema, shock and multi-organ insufficiency syndrome (MOIS). To forecast the treatment length, we obtain simplified mathematical expressions in the form of score estimates.

Results: The significance of the clinical indicators "MOIS", "conscience" and "spasm" has been confirmed. A forecast matrix that gives the opportunity to forecast the personal duration of hospital treatment for each patient has been built.

14. Чернева, Д., Г. Янева, Д. **Иванов**. 2017. Кои са най-популярните лекарствени растения сред населението в района на Северното Черноморие?. Варненски медицински форум, т. 6, 2017, брой 1 : 110-115.

Резюме

Настоящото изследване е част от по-широко етноботанично проучване проведено в района на Северното Черноморие през периода април – юни 2015 година, чрез техниката интервю лице в лице. Анкетирани бяха 185 души избрани на случаен принцип.

Целта на настоящото проучване бе да разберем кои билки са най-популярните и да съберем данни за местните имена, използвана част и етноботанична употреба, като определим кои са „Билките на Баба“ – най-популярните билки, за които информацията се предава основно словесно.

От споменатите в анкетата 103 растителни вида принадлежащи към 54 семейства, 83 вида са български и 20 вида са чужди растения, като за 79 вида български растения са попълнени данните посочени в анкетата.

На база посочените данни е установено наличие на стабилно познание за билките и тяхната етноботанична употреба сред местното население на Северното Черноморие. Най-популярни се оказаха 26 български растения и те съответно бяха определени като „Билките на Баба“.

15. Cherneva, D., G. Yaneva, D. **Ivanov**. 2017. Ethnobotanical study of the impact of certain demographic indicators on the attitudes towards the use of medicinal plants among local population of the North Black Sea Coast. Scripta Scientifica Pharmaceutica, vol. 4, No. 1, 2017: 7-11. online first Medical University of Varna

Abstract:

This study aims to explore the attitude of the local population of the North Black Sea coast area towards the use of medicinal plants and to evaluate the impact of demographic indicators such as gender, age, education and residence. The survey was conducted in the period April - June 2015 in various towns and villages, using face-to-face interview technique with random demographic selection of respondents. Pearson's coefficient (r) was used for assessment of the impact of demographic indicators on respondents' answers. Survey results show that 96.85% have a positive attitude, and only 4.32% exhibit indifference. From the demographic characteristics, only gender and age have a moderate impact. Cross-link analysis reveals that with the increase of the age of males their positive attitude towards the use of medicinal plants also increases, while female ratio is not significantly changed. The share of indifferent respondents and those who are positive but do not use medicinal plants, for both genders, is greatest among respondents aged between 20 and 30 years.

The local population of the North Black Sea coast area demonstrates a steady positive attitude towards the use of medicinal plants without outlining regional and local differences. A tendency of decreasing interest in medicinal plants among the younger generation is observed, which on its behalf is weakening the traditional knowledge on medicinal plants and its continuity.

16. Cherneva, D., G. Yaneva, D. **Ivanov**. 2017. Ethnobotanical study of the attitudes towards herbal remedies and conventional medicines among local population of the North Black Sea Coast. Scripta Scientifica Pharmaceutica, vol. 4, No. 1, 2017: 12-15. online first Medical University of Varna

Abstract:

The interest in phytotherapy in Bulgaria has a longstanding tradition.

This ethnobotanical study aims to investigate the attitude of the local population of the North Black Sea coast area towards the use of plant-based products compared to conventional medications and to report the impact of various demographic indicators on it.

The survey was conducted in the period April - June 2015 in various urban and rural areas, using face-to-face interviews technique with random demographic selection of respondents, men and women of different social status and age. The Pearson correlation coefficient (r) was used for assessment of the impact of demographics on respondents' answers.

Maximum positive attitude has been declared by the highest percentage of respondents - 33.51 percent. Negative responses score a minimum of 0.54 percent. Demographics analysis presents moderate impact of age only. The percentage of respondents with a score

of 10 is impressively higher for those aged over 41, compared to the ones under the age of 40.

Results vary in terms of '0' evaluation. Highest values were observed in the age groups of 41-50 and over 70.

The majority of interviewees - 75.68 percent, prefer combination therapy; 29.19 percent rely only on herbal remedies, and 12.97% indicate both answers.

The population of the North Black Sea coast area demonstrates a positive attitude towards the use of medicinal plants and herbal remedy treatment. A clear case position has been defined: 100 percent use of medicinal plants for prophylactic purposes, treatment – use of herbal remedies in combination with medications.

17. Marinov, P., Georgiev, K., Subeva, Y., **Ivanov, D.**, Zlateva, S., Vazharov, I. 2017. Acute intoxications with ethylene glycol in Varna region: 25-year experience. Scripta Scientifica Medica, vol. 49, No. 3, 2017: 23-27, online first Medical University of Varna

Abstract:

Ethylene glycol (EG) is a bivalent alcohol. It is composed of many commercial and industrial products such as anti-freeze, coolants, deicing fluids, brake solutions, detergents and lacquers and is used as an organic solvent of many substances. Accidental and intentional poisonings with EG are rare, but potentially lethal and are a challenge to the clinical toxicology. Retrospectively, we followed the acute intoxications with EG for a 25-year period (1991-2015) in the Varna region, Republic of Bulgaria. The subject of the study were 95 patients with acute EG poisoning, at an average age of 46.8 years (21-77), who had received treatment at the Clinic of Toxicology and the diagnosis was confirmed by gas chromatographic method. EG intoxications are specific to the male gender, male:female 6.9:1. All poisonings were result of oral intake mainly of antifreeze, 92.6% of them being accidental and only 7.4% - deliberate. A lethal outcome was registered in 8 (8.4%) patients. Extreme renal insufficiency occurred in 9 (10.3%) of the surviving patients.

18. Marinov, P., Georgiev, K., Sabeva, Y., **Ivanov, D.**, Zlateva, S., Vazharov, I. 2017. Acute methanol intoxications registered in Varna region (Bulgaria) for a 25 year period. Scripta Scientifica Medica, vol. 4, No. 2, 2017: 14-18

Abstract:

This retrospective study was conducted to follow out acute intoxications with methanol in Varna region (Bulgaria) for a 25-year period (1991-2015). At that time, 98 patients with methanol poisoning were registered in the Clinic of Toxicology of Military Medical Academy in Varna, Bulgaria. The average age of the patients was 44.5 years. The diagnosis was made based on symptoms and was confirmed by gas chromatographic analysis of methanol concentration. The majority of poisonings were accidental – 88.9%, and only a small part was with suicidal intention (9.2%). Lethal outcome was registered in 38 patients. Eight of the survived patients (13.3%) were with residual visual impairment and six of them had permanent neurological complications.

19. Cherneva, D., G. Yaneva, D. **Ivanov**. 2017. Impact of demographic characteristics of the local population of the Northern Black sea coast on the use of medicinal plants. Annual of Sofia University "St. Kliment Ohridski", Faculty of Biology, Book 2 – Botany, Volume 101, 2017: 89-94.

Abstract:

The present study aims to examine the impact of demographic indicators gender, age, education and place of residence on the use of medicinal plants by the native population of the Northern Black Sea coast. The survey was conducted in eleven cities and nine villages between April and June 2015. The face-to-face interview technique was used and the respondents were randomly selected. The impact of demographic indicators on the respondents' answers was assessed by calculating the correlation coefficient of Pearson (r). The results show that the majority of respondents (83.78%) used medicinal plants mainly for treatment and prevention of diseases, approximately half of them (45.95%) used them for nutrition. Respondents using medicinal plants for decoration and for business have an insignificant share (9.73% and 1.08%, respectively). From the demographic analysis of the results, a moderate influence of all four demographic indicators on the respondents' answers was registered. The analysis of cross-links revealed that the attitude to the use of medicinal plants by women, unlike men, was not significantly influenced by age. The share of respondents from rural areas using medicinal plants for treatment and prevention of diseases was equal to those using them for nutrition, while the respondents from the cities using medicinal plants for treatment and prevention were twice more than those using them for nutrition. Regional differences were discovered comparing our data for use of medicinal plants of the local population with published data from the inland of the country.

20. Иванова, Н., Иванов, С., Янева, Г., Димитрова, Ц., **Иванов, Д.** 2017. Анализирани съществуващи класификации на обогатени с тромбоцити плазмени концентрати (PRP). Научни трудове на съюза на учените в България-Пловдив, серия г. медицина, фармация и дентална медицина, Том XXI: 254-257.

Abstract:

With regard to platelet concentrates, most products are called platelet-rich plasma (PRP). This term is very general and incomplete, leading to a lot of confusion in the scientific database. The terminology used to designate products derived from platelet-rich plasma undergoes constant modification and adaptation due to the wide range of their physicochemical characteristics. The most important factor in determining the different types of platelet concentrates is to ensure the exact number of their cellular components. Without their precise quantification, validation and comparison will remain an extremely difficult task, which ultimately is most important for proper clinical application. PRP can be prepared in a variety of different ways and also in many different forms, and this variety reflects multidisciplinary application. These variations inevitably influence the composition and potential efficacy of the biologically active material. The large variability leads to a lack of consensus with regard to activation time of the PRP product or whether

the activation is generally needed. There are also divergent views on whether PRP is better to be activated in vitro and placed in vivo or to allow local factors to induce (in vivo). The aim of this study is to analyze the existing classifications of platelet-enriched concentrates.

In order to achieve this goal a literary review of existing classifications for platelet-enriched concentrates was made. The leukocyte content, amount of concentrated platelets, activation, fibrin mesh were analyzed.

In conclusion, we can summarize that the more specific and less extensive the classification for these products, the easier it would be to characterize and adapt to the desired clinical application.

21. Маринов, П., Златева, С., Бончев, Г., Събева, Ю., Бозов, Г., Йовчева, М., Керезова, Ж., **Иванов, Д.**, Въжаров, И. 2017. Остри алкохолни интоксикации – 25 – годишен опит. Авиационна, морска и космическа медицина, т. 1:6-9.

Резюме:

Острите интоксикации с алкохол заемат водещо място в структурата на острите отравяния. Извършен е ретроспективен анализ на острите алкохолни интоксикации във Варненския регион за 25-годишен период (1991-2015 г.). хоспитализираните пациенти с алкохолни отравяния са 3803 или 21,8% от всички остри екзогенни интоксикации /ОЕИ/. Преобладават етаноловите отравяния – 3610 души (94,9%), като отравянията с метанол и етиленгликол на съответно 98 (2,6%) и 96 (2,5%). Алкохолните интоксикации се срещат по-често при мъжете – 2123 души (58,8%). Острите отравяния с етанол се срещат във всяка възраст, като най-висока е честотата им сред трудоспособното население. Нараства честотата им при подрастващите. Изходът от острите етанолови интоксикации е благоприятен, като леталитетът е нисък – 0,5%.

22. Маринов, П., Златева, С., Димитрова, Ц., Йовчева, М., Бончев, Г., Бозов, Г., **Иванов, Д.**, Въжаров, И., Янева, М. 2017. Приложение на хипербарна оксигенация при фалоидна интоксикация. Авиационна, морска и космическа медицина т. 2:20-24.

Резюме:

Фалоидните отравяния са с ниска честота, но се отличават в висок леталитет, което налага прилагане на всички възможни методи за лечение, допринасящи за благоприятен изход.

Целта на авторите е проучване ефекта на хипербарната оксигенация /ХБО/ при интоксикации с фалоидни гъби.

Материал и методики: изследването е ретроспективно и обхваща 147 болни с фолоидни интоксикации, 22 от които са лекувани с ХБО като част от комплексно приложената терапия.

Резултати: отчитаме много добър ефект от прилагането на ХБО във възстановителния стадий на фалоидните отравяния. Основният обективен критерий е значителната редукция и/или нормализиране стойностите на чернодробните трансаминази (ASAT и ALAT) при изписването на пациентите от клиниката.

Същевременно не сме регистрирали значими странични ефекти в хода на лечението с ХБО.

Изводи: ХБО е ефективен лечебен и сравнително безопасен метод при остри интоксикации с фалоеидни гъби. Прилага се след 4-тия ден от поглъщането на гъбите.

23. Иванова, Н., Иванов, С., Янева, Г., Димитрова, Ц., **Иванов, Д.** 2017-2018. Сравнителна оценка на използването на обогатена с тромбоцити плазма (prp) в ортопедичната амбулаторна практика за лечение на заболявания на сухожилията чрез иновативен метод на получаване. Научни трудове на съюза на учените в България-Пловдив, серия г. медицина, фармация и дентална медицина, Том XXII: 189-193.

Abstract:

Some of the most common orthopedic problems in outpatient practice are the so-called tendinosis - diseases of the tendons caused by overloading. They affect mostly people that perform repetitive activities at work, as well as professional athletes and people playing for pleasure. The tendons that are most commonly affected are these from medial and lateral epicondyles of the elbow, the patella, the rotator cuff and the Achilles tendon. There are many conservative methods of treatment: resting, bracing, NSAIDs, stretching, local corticosteroids, botox toxin, shock wave therapy, PRP therapy.

The most common method of treatment of enthesopathia of the elbow joint in clinical practices local use of corticosteroids. Enthesopathia is a pathological condition in which there are degenerative changes in tendons. These degenerative changes are due to hypovascularisation. These dystrophic changes reduce tendon strength and predispose them to rupture. The use of PRP therapy leads to increase of the local concentration of growth factors, which induces controlled inflammatory response with subsequent stimulation of neovascularization in the tendon and stimulation of angiogenesis.

24. Marinov, P., Bonchev, G., **Ivanov, D.**, Zlateva, S., Dimitrova T., Georgiev, K. 2018. Mushrooms intoxications. J of IMAB. 2018 Jan-Mar;24(1) :1887-1890.

Abstract:

Purpose: To perform a retrospective analysis of mushroom poisonings in Varna region for 25 years (1991-2015). Mushroom poisonings account for 10.7% of hospitalizations associated with acute exogenous intoxication. Poisoning with *Amanita phalloides*, *Amanita pantherina*, *Amanita muscaria* and various fungi that cause only gastrointestinal symptoms are of greatest importance for the clinical toxicology in the Republic of Bulgaria.

Material/Methods: Objects of the study were 1872 patients who received treatment at the Clinic for Intensive Treatment of Acute Intoxications and Toxicallergies, Naval Hospital – Varna, Military Medical Academy, Bulgaria after eating mushrooms.

Results: Patients with irritative gastroenteritis – 1703 (91%) were with the highest frequency, followed by those with *Amanita phalloides* intoxication - 147 (7.8%). *Amanita*

phalloides poisonings are not common and have a low relative share to all mushroom intoxications, but they are characterized by severe course and high lethality.

Poisonings with *Amanita pantherina* and *Amanita muscaria* are even less common – 22 (1.2%). Patients accepted for treatment were both male (50.5%) and female (49.5%). Patients in age between 25 and 60 years were prevalent – 1171 (62.6%). A fatal outcome was registered in only 25 patients with *Amanita phalloides* intoxications, which represents 17% of all patients with *Amanita phalloides* poisoning and 1.3% of all patients with mushroom intoxications.

Conclusion: Mushroom poisonings causing irritant gastroenterocolitis and those with *Amanita pantherina* and *Amanita muscaria* have a good prognosis. *Amanita phalloides* intoxications are characterized by the development of life-threatening organ damages and high lethality.

25. G. Yaneva, Ts. Dimitrova, DJ. Cherneva, N. Ivanova, I. Maslarski, St. Sivkov, D. **Ivanov**.. Comparative dermatoglyphic study of the palmar ridge count in breast carcinoma patients from Northeast Bulgaria. Acta morphologica et anthropologica Vol. 25, Number 1-2, 2018:86-92.)

Abstract:

The present study was aimed to assess the relationship of quantitative dermatoglyphic analysis of the palmar ridge count and the predisposition for developing of breast cancer. The study was conducted among 82 women with breast carcinoma diagnosed by histological and mammographic investigations and 60 healthy women for the control group from Northeast Bulgaria. Palmprints were obtained by the ink method. The palmar ridge count was read by the method of Cummins and Midlo.

Statistically significant differences were estimated in the total palmar ridge count in b-c and a-d interdigital fields on both hands in cases with breast cancer compared to healthy controls. In a-b and c-d interdigital fields, no statistically significant differences were determined. Statistical significance was examined by SPSS 18.0 software.

The palmar dermatoglyphics is simple, inexpensive, anatomical and non-invasive method and may be used as a reliable tool for screening predisposition of breast cancer.

26. G. Yaneva, Ts. Dimitrova, DJ. Cherneva, N. Ivanova, I. Vachkov, St. Sivkov, D. **Ivanov**. Quantitative dermatoglyphic study of the finger ridge count in breast carcinoma patients from Northeastern Bulgaria. Scripta Scientifica. Salutis Publicae Vol. 4, Number 1, 2018:7-11.

Abstract:

The present study aimed to assess the relationship between the results from a quantitative dermatoglyphic analysis of the finger ridge count and the predisposition for developing breast cancer.

The fingerprints of 82 breast carcinoma female patients diagnosed by histological and mammographic investigations were obtained and compared to 60 female controls from Northeastern Bulgaria. The fingerprints were obtained by classical ink method. The finger ridge count was determined by the method of Cummins and Midlo.

The total finger ridge count (TFRC) showed statistically significant difference between the patients and the controls on the first and second finger of the right hand and on the second and third finger of the left hand. Due to statistically significant differences of TFRC on some of the fingers, we discovered differences in the descending formulas in the two observed groups. Descending formulas on the fingers of the breast carcinoma patients compared with the controls on the left hand were respectively 2>4>1>5>3 vs 2>1>4>5>3, and on the right hand 1>2>4>3>5 vs 4>1>3>2>5, respectively. Statistical significance was examined by SPSS 18.0 software.

Our data indicated that a dermatoglyphic analysis could be utilized as a fast inexpensive supportive screening tool for the early diagnostics of breast cancer.

27. Pasheva, M., Nashar, M., **Ivanov, D.**, Ivanova, D. 2018. Traditional usage of heartwoods from different arboreal species in inland and coastal regions of Bulgaria. Acta zool. bulg., Suppl. 11, 2018: 99-104

Abstract:

Plants have been used in Bulgarian traditions for thousands of years. Apart of the knowledge about the healing potential of some popular tree species, stems and heartwood are used traditionally in Bulgaria for coloring of hard alcoholic beverages. Popular believes suggest that colored drinks in small quantities could possess certain health beneficial effects due to the plant constituents extracted during the process of coloration. Here we present an overview of the arboreal species, known to be used for manufacturing of barrels for maturation or for coloring of beverages at home in Bulgaria. Based on the existing data, we suggested that the specific phytochemical characteristics of the heartwoods of different species could contribute for the organoleptic characteristics of the colorized beverages as well as for their beneficial effects on the metabolism when consumed in moderate quantities.

28. **Ivanov, D.**, Cherneva, D. 2018. Biodiversity of Medicinal Plants from the Northern Black Sea Coastal Wetlands. Part 2 - Durankulak Lake Protected Area. Scr Sci Pharm, vol. 5, No. 1, 2018: 21-29.

Abstract:

The present study aims to supplement the available research data on medicinal plants of the Durankulak Lake area. Survey results established a significant variety of medicinal plants: 112 species of higher plants referring to 34 families and 87 genera. The prevailing biological type is the herbaceous perennial type (67 species or 60%). Considering moisture and humidity as a factor, the mesophyte plants (presented by 48 species or 43%) occupy dominant position among the medicinal plants. Eurasian geo-elements (20 species or 18%) are predominant, followed by the Euro-Mediterranean (18 species or 16%), sub-Mediterranean (17 species or 15%). Among the medicinal plants there is only one Balkan endemic species. Medicinal plants of conservation significance represent 11.4% or 13 species. The established medicinal plants have more than 30 types of healing actions, one fifth of which is used primarily for the treatment of gastrointestinal diseases. The species in which the aboveground part (herba) is collected for plant substance constitute half of

the established medicinal plants. The in-depth analysis benefits the comparison of the biodiversity of medicinal plants in the Durankulak Lake wetland area with other wetlands.

29. **Ivanov, D.**, Marinov, P., Zlateva, S., Dimitrova, Ts. 2018. Poisoning with *Amanita phalloides* (Vaill. ex Fr.) Link - a 25-Year Retrospective Analysis in Varna Region, Bulgaria. *Scr Sci Pharm*, 2018; 5(1):30-34.

Abstract:

Fungal intoxications are important in the ethology of acute exogenous intoxications and *A. phalloides* mushrooms intoxications are the most important for clinical toxicology. Poisonings with *A. phalloides* mushrooms are infrequent, but they have high lethality due to their high toxicity. A retrospective analysis of poisonings with *A. phalloides* mushrooms in Varna region for a period of 25 years (1991-2015) was conducted and 147 patients have been registered. The frequency relative to all hospitalised patients with acute poisoning is 0.8%. Such intoxications are more common in males and the ratio of men to women is 1.62:1. The largest number of intoxications was registered in the age group of 45 to 60 years - 62 (42.2%). All intoxications occurred following oral ingestion of *A. phalloides* mushrooms by mistake instead of edible mushrooms such as field mushroom - *Agaricus campestris* L. A lethal outcome was registered in 25 patients (17%). *A. phalloides* mushrooms account for 11.4% of the lethality in acute poisonings.

30. Synowiec-Wojtarowicz, A., Kiselova, Y., **Ivanov, D.**, Ivanova, D., Bialik, W., Kimsa-Dudek, M., Pawłowska-Góral, K. Effects of polyphenol supplementation on the in vitro antioxidant potential of citrus juices. *Scr Sci Pharm*, 2018; 5(1):35-39

Abstract:

Food preparations containing substances with antioxidant activity have considerably aroused the interest of consumers, which has led to the marketing of a number of dietary supplements such as resveratrol, hesperidin or chlorogenic acid. On the other hand, natural antioxidants present in citrus fruit juices, together with dietary supplements, could contribute to an enhancement of their antioxidant properties and, in turn, alter their physiological impacts. The aim of the study was to evaluate the effect of supplementation of freshly squeezed citrus juices with resveratrol, hesperidin and chlorogenic acid on the in vitro antioxidant potential of the juices. The solutions of juices, selected polyphenols and the mixtures of solutions of juices and solution of polyphenols were analyzed to determine total polyphenol concentration using the Fast Blue method and total antioxidant potential by the ABTS method. As a result three different types of interactions were established: synergistic of chlorogenic acid which additionally increased the antioxidant potential by 35 – 38% over theoretical predictions, additive – after addition of resveratrol, and antagonistic - in the case of hesperidin. While the antioxidant potential was substantially higher in the mixture of mandarin juice with chlorogenic acid, the measured total polyphenol concentration decreased. Also a considerable decrease in the concentration of polyphenols was measured in the mixtures of mandarin and orange juices with resveratrol, all these possibly due to the sensitivity to other substances present in

juices of the analytical method applied. A correlation between antioxidant potential of all examined solutions and total polyphenol concentration was found ($r^2=0.8879$).

31. Marinov, P., **Ivanov**, D., Zlateva, S., Dimitrova S., Kehayova, G., Radeva, M. 2018. Intravenous lipid infusion in toxicological practice. *Scr Sci Pharm*, 2018; 5(1):40-46.

Abstract:

The use of intravenous lipid emulsions (ILEs) is a relatively new method of treatment in toxicology. Initially, it was applied to control the resistant to other therapeutic methods systemic toxicity of local anesthetics. In the last decade this therapeutic method has been approved and recommended. Thereafter, attempts have been made to clarify the effect of ILEs in cases of acute intoxications with lipophilic xenobiotics, other than the local anesthetics.

32. Marinov, P., **Ivanov**, D., Zlateva, S., Dimitrova.S., Kehayova, G., Radeva, M., Stoeva, S. Intravenous lipid emulsion infusion in acute intoxication with fenitrothion. *Scr Sci Pharm*. 2018; 5(1):47-50.

Abstract:

Acute intoxications with organophosphorus pesticides (OPs) are a challenge for the clinical toxicology, because they are common, severe and with high lethality. Most OPs are lipophilic. In recent years, intravenous lipid emulsion (ILE) has been successfully used to treat acute poisoning with lipophilic xenobiotics. A clinical case of a 64-year-old male hospitalized after oral intake of 50 ml of fenitrothion is reported. He had been hospitalized with tachypnea and depressed consciousness – 8 by Glasgow Coma Scale (GCS). Treatment standardized for this type of intoxication was initiated. On the 3rd hour treatment with Intralipid 20% was started, with a bolus dose of 1.5 ml/kg followed by infusion at a rate of 0.25 ml/kg/min to a total dose of 1000 ml. At the 16th hour consciousness was restored to GCS-15. In severe OPs intoxications ILE can be used as an additional method of controlling cardiotoxic and neurotoxic effects.

33. Sokrateva T, Ivanova D, Galunska B, Todorova M, **Ivanov** D. Physicochemical analysis of Varna basin mineral water. Proc.18th International Multidisciplinary Scientific GeoConference SGEM Hydrology and Water Resources, 2018 (in press)

Abstract:

This study aims to supplement the available research data on medicinal plants for the territory of Shabla-Ezeretz Lake Complex Protected Area by carrying out a taxonomic and analysis of the floristic elements and creating a database of their therapeutic action, usable parts and the groups of diseases they are applicable for.

The medicinal plants identified as such in our surveys constitute 113 species of higher plants referring to 46 families and 91 genera. The predominant biological types are

herbaceous perennial plants - 69 species or 61 percent. With respect to moisture and humidity as a factor dominant position hold the mesophytes - 49 species (43%). Eurasian geo-elements are prevalent (26 species or 23%), followed by Euro-Mediterranean, cosmopolitans and sub-Mediterranean (14 species or 12%). Among the medicinal plants in the studied wetlands there are 33 species (29%) of conservation significance. The established medicinal plants have a wide variety of more than 38 types of healing action. Half of them are used mainly for the treatment of gastrointestinal diseases, kidney and urinary tract diseases, respiratory diseases, and those with haemostatic action. The species in which the above ground part (herba) is collected dominate over the rest and represent half of the established for the area medicinal plants.

34. **Ivanov, D.**, Чернева, Д. Biodiversity of Medicinal Plants from the Northern Black Sea Coastal Wetlands Part 1 - Shabla-Ezeretz Lake Complex Protected Area. Ann Sof Univ Book 2-Botany, Vol. 102, 2018: 89-99.

Abstract:

This study aims to supplement the available research data on medicinal plants for the territory of Shabla-Ezeretz Lake Complex Protected Area by carrying out a taxonomic and analysis of the floristic elements and creating a database of their therapeutic action, usable parts and the groups of diseases they are applicable for.

The medicinal plants identified as such in our surveys constitute 113 species of higher plants referring to 46 families and 91 genera. The predominant biological types are herbaceous perennial plants - 69 species or 61 percent. With respect to moisture and humidity as a factor dominant position hold the mesophytes - 49 species (43%). Eurasian geo-elements are prevalent (26 species or 23%), followed by Euro-Mediterranean, cosmopolitans and sub-Mediterranean (14 species or 12%). Among the medicinal plants in the studied wetlands there are 33 species (29%) of conservation significance. The established medicinal plants have a wide variety of more than 38 types of healing action. Half of them are used mainly for the treatment of gastrointestinal diseases, kidney and urinary tract diseases, respiratory diseases, and those with haemostatic action. The species in which the above ground part (herba) is collected dominate over the rest and represent half of the established for the area medicinal plants.

35. Янева, Г., Димитрова, Ц., Иванова, Н., Чернева, Д., Масларски, И., **Иванов, Д.** Дерматоглификата като прогностичен биомаркер при жени с рак на млечната жлеза. Електронен сборник – Национална научна конференция „15 години фармация в Медицински университет – Пловдив. 2018: (под печат)

Резюме:

Ранното диференциране на дерматоглифичните изображения, както и относително лесните методи за получаване и съхраняване на пръстовите и дланните отпечатащи позволяват тяхното използване за проучване на генетичната основа на рака на млечната жлеза (РМЖ). Настоящият литературен обзор систематизира нови данни от фундаментални и клинични изследвания върху дерматоглифичните изображения при жени с РМЖ. Целта е да се установи връзката между дерматоглифичните

изображения при жените и предразположеността им към развитието на РМЖ. Има се предвид образуването на тези изображения още през ранното ембрионално развитие. Съществуват редица убедителни доказателства за това, че особеностите в дерматоглифичния статус могат да се използват като прогностичен биомаркер при някои наследствени заболявания, включително и при РМЖ.

36. Чернева, Д., **Иванов, Д.** Етноботанично проучване на влиянието на определени демографски показатели върху начините на снабдяване с билки сред местното население на Северното Черноморие. Електронен сборник – Национална научна конференция „15 години фармация в Медицински университет – Пловдив. 2018: (под печат)

Резюме:

Настоящото изследване има за цел да провери кои са основните начини на снабдяване с билки сред местното население на Северното Черноморие и да отчете влиянието на демографските показатели пол, възраст, образование и местоживееене. Резултатите показват, че покупката като начин на набавяне на билки се посочва от най-голям брой анкетираните – 93%, като за 68.11% това е единственият начин на набавяне. На второ място се посочва събирането от естествените местообитания - съобщено от 81 % от анкетираните, от които 49.19% са посочили само този начин, а на трето място е отглеждането в градината - съобщено от 45% от информаторите, от които половината (24.86%) дават само този отговор. Демографският анализ показва, че и четирите демографски характеристики оказват значително влияние върху начина на снабдяване с билки. За в бъдеще може да очакваме още по-голямо намаляване на ръста на населението, което ще събира и отглежда билки за сметка на това, което ще ги купува.

37. Pantelis D, Tasinov O, Ivanova D, Kiselova-Kaneva Y, Tzaneva M, Stefanova M, **Ivanov D**, Ivanova D. Combining RNA isolation, cDNA synthesis and preamplification method efficacy for gene expression analysis from formalin-fixed paraffin embedded tissue. Lab Medicine. 2018 (submitted)

Abstract

Background: The aim of the study was to compare three modified methods for RNA extraction from formalin-fixed paraffin embedded (FFPE) biopsied tissue and different cDNA synthesis strategies to facilitate study of gene expression.

Methods: Compared RNA extraction methods were: lysis buffer; phenol-based extraction; combination of both with concomitant use of silica-based spin columns. RNA quantity and purity was estimated spectrophotometrically. Different priming strategies for cDNA synthesis were applied: oligodT; combination of oligodT and random hexamer; gene specific primer. Two-step RT-qPCR of ribosomal protein L37A on preamplified and non-preamplified cDNA templates was performed.

Results: The combination of lysis buffer with phenol based extraction gave higher RNA yield. Confidence of detection by qPCR was increased by performing cDNA

preamplification, and efficiency was improved. The preamplified template increased sensitivity of analysis.

Conclusions: Together, the combination of approaches improved substantially the reproducibility and validity of quantitative gene expression analyses from FFPE tissues.

38. Yaneva G, Dimitrova T, Sivkov S, **Ivanov D.** Fluctuating asymmetry in dermatoglyphic features in women with breast carcinoma. Folia medica Vol. 60 issue 2, 2018 (submitted).

Abstract:

Breast carcinoma is one of the few tumors in which clinically non-manifested forms could be found through active research. Breast carcinoma discovery at an early stage leads to effective treatment and reduces mortality.

The search for changes in the fluctuating asymmetry of dermatoglyphic features can be a noninvasive, cheap and effective method for screening and investigation of finger and palm papillary patterns in a population of patients with high risk of developing this disease. Early determination of the symptoms can help in the diagnostics of the disease and the related complications.

Papillary finger pattern, total ridge count of homologous fingers (TFRC), a-b palmar ridge count, and atd angle are used as criteria for the ability of the organism to neutralize harmful influences in the prenatal period and the evaluation of the degree of fluctuating asymmetry.

Варна 26.06.2018 г.

Подпис:

