

# On Occasion of the 11th "Days of AMNuBiH 2020" and "SWEP 2020" conferences, Sarajevo, Bosnia and Herzegovina

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In Sarajevo, Bosnia and Herzegovina, at Holiday hotel on November 14th, 2020 has been organized 11th annual scientific meeting of the Academy of Health Sciences of Bosnia and Herzegovina "Days of AMNuBiH 2020" and 3rd Seminar about Writing, Editing and Publishing - "SWEP 2020".

Topics of the conferences were:

- Bosnia and Herzegovina experiences related to the COVID-19 pandemic;
- Study design and editing of medical journals.

Speakers at the conferences were from Bosnia and Herzegovina: Izet Masic, Sarajevo (Medical, Social and Ethical Dilemmas in COVID-19 Times: How to Decide Who and What to Do and The Basic Principles of Editing Biomedical Scientific Journals), Muharem Zildzic, Gracanica (The Importance of Nutrition in Boosting Immunity for Prevention and Treatment COVID-19), Osman Sinanovic, Tuzla (COVID-19 Pandemic: Psychiatric and Neurological Consequences), Sefik Hasukic, Tuzla (The Elective Diagnostic Laparoscopy in Chronic Abdominal Disorders in Pandemic Conditions), Senaid Trnacevic (Organ Transplantation in Bosnia and Herzegovina Within Limiting Circumstances Cased by COVID-19 Pandemic), and Emir Mujanovic (Organization of the Work of the Medical Institute Bayer in Tuzla During the COVID-10 Pandemic).

- from Croatia: Asim Kurjak, Dubrovnik (Has Science Helped or Hindered the Battle with the Corona Pandemic), with co-authors: Milan Stanojevic, Zagreb and Miro Jakovljevic, Zagreb.
- from Serbia: Slobodan Jankovic, Kragujevac (The Importance of Adequate Research Design in Biomedicine);
- from North Macedonia: Doncho Donev, Skopje (Predatory in Scientific Publication - a Burning Issue in Science); and
- from Poland: Sylwia Ufnalska, Poznan (Physical Activity Outdoors as an Alternative to Lockdown: the Three Cs Strategy).

During SWEP 2020 participants have possibility to at-

tend Short course in research design - five key components / phases:

1. Choice of research topic;
2. Choice of study type;
3. Sample size calculation and sample selection;
4. Selection of study variables;
5. Ethics Committee and regulations.

Presidency of the "Days of AMNuBiH 2020" and "SWEP 2020" were academicians: Izet Masic, President, and Mu-

**DAYS OF THE ACADEMY OF MEDICAL SCIENCES OF BOSNIA AND HERZEGOVINA 2020**

**SWEP 2020**

**TOPICS**

Bosnia and Herzegovina Experiences Related to the Covid-19 Pandemic

Study Design and Editing of Medical Journals

**PARTICIPANS**

**Asim Kurjak:** Has science helped or hindered the battle with the corona pandemic?

**Izet Masic:** COVID-19 pandemic - dilemmas, truths and misconceptions

**Osman Sinanovic:** COVID-19 pandemic: psychiatric and neurological consequences

**Muharem Zildzic:** Nutrition and strengthening of immunity in patients with COVID-19 infection

**Senaid Trnacevic:** Organ transplantation in BiH within limiting circumstances caused by COVID-19 pandemic

**Emir Mujanovic:** Organization of the Medical Institute „BAYER“ operation in Tuzla during the COVID-19 pandemic

**Sylwia Ufnalska:** Strolls and gardening: can they help to fight the pandemic?

**Izet Masic:** How to improve the editing of medical journals?

**Slobodan Jankovic:** The importance of adequate study design application in biomedical sciences

**Doncho Donev:** Predatory in scientific publication - a burning issue in science

Nov 14, 2020  
Sarajevo, Hotel Holiday

EPMI

Figure 1. Poster of the "Days of AMNuBiH 2020 and SWEP 2020" held in Sarajevo on November 14th, 2020



Figure 2 Moderators of the “Days of AMNuBiH 2020 and SWEP 2020”:: Izet Masic, Slobodan Jankovic, Muharem Zildzic (from right to left)

Muharem Zildzic and Slobodan Jankovic, members, who excellently co-ordinated and administrated Webinar using ZUM ICT with participants in Dubrovnik (Asim Kurjak and Milan Stanojevic), Split (Izet Hozo), Skopje (Doncho Donev), Memphis (Kenan Arnautovic), Tuzla (Osman Sinanovic, Sefik Hasukic, Emir Mujanovic and Senaid Trnacevic), Sarajevo (Mirza Biscevic) and Gracanica (Nizama Salihefendic).

During “SWEP 2020” in Sarajevo members of AMNuBiH accepted as official strategic documents of Academy of Medical Sciences of Bosnia and Herzegovina: “The Basic Principles of Editing Biomedical Scientific Journals” and “Importance of Adequate Research Design in Biomedicine”, as Guidelines which will be published in the next issue of *Acta Informatica Medica* journal and distributed to other medical journals in former Yugoslav countries, similarly we have done it at “SWEP 2016”, when 17 editors of Medical journals from South Eastern Europe countries adopted “Sarajevo Declaration on Integrity and visibility of Scholarly Publications”. This publication primarily was published in the Croatian Medical Journal and translated in several other languages..

The first document is useful for improving editing of medical journals, both on regional and global level, because numerous studies, editorials, expert opinions and other types of publications direct our attention to weaknesses and mistakes of editing that have or will have adverse consequences to ultimate goal of writing in health sciences. Just in one study of highly ranked orthopedic journals citation error rate of 41% was found, as we noticed during presentation this Guidelines at “SWEP 2020”. Editors of medical journals are faced with a number of problems that are mostly caused by ignorance or inexperience of the authors: duplicate submissions, inadequately prepared submissions, insufficient availability of competent and knowledgeable reviewers, low methodological quality of the submissions, etc. It is reason that editors of medical journals are left without evidence-based practical guidelines how to conduct their job with success and avoid many pitfalls in their way.

The second document used analytical method for explanation of five most important steps and phases which are obligatory to use in process of making of appropriate and qualitative research design for providing study investigation in biomedical research. It will be very useful for validity of a study results depends directly on appropriateness of its design, because it is only through careful planning that bias is minimized and the aims set in advance achieved. If all five essential steps are thoroughly completed, as described in this document, the study that was designed will be most likely free of critical methodological errors.

Finally, this our annual meeting was organized in very bad and difficult Corona time, when almost 1000 citizens of Bosnia and Herzegovina daily suffered by COVID-19 infection. Unfortunately, schools, faculties, universities, libraries, other important institutions and educational and social associations are closed. We are happy that our Academy didn't break our activity and its members at the “Days of AMNuBiH 2020” and “SWEP 2020” conferences in Sarajevo have given a small contributions to medical science for continuing the fight with corona virus.

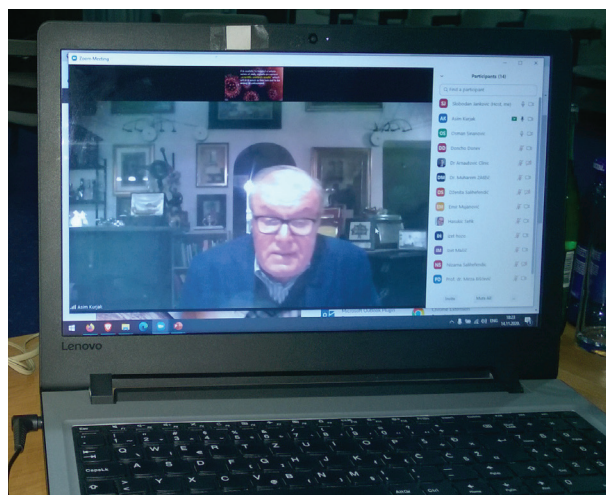


Figure 3. Academician Asim Kurjak presented his paper via Zoom from Dubrovnik, Croatia

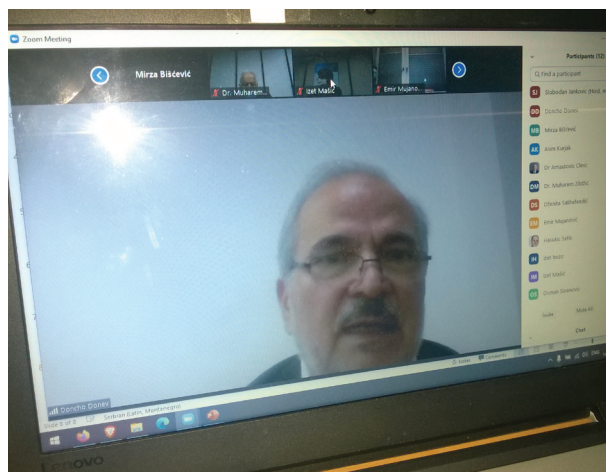


Figure 4. Academician Doncho Donev presented his paper via ZOOM from Skopje, North Macedonia

# BOSNIA AND HERZEGOVINA EXPERIENCES RELATED TO THE COVID-19 PANDEMIC

## ABSTRACTS

### Has Science Helped or Hindered the Battle with the Corona Pandemic?

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#### ABSTRACT

The coronavirus pandemic exposes the weaknesses of globalization and serves as a warning on the constants of the natural law on the survival of any nation or human community: only a well-organized modern state is capable of protecting its citizens, and this presumes the acceptance of the roles of borders, control and the authority principle while the economic and healthcare sovereignty requires the necessity of the principle of self-sufficiency in the areas of agriculture, nutrition and the necessary production of medication and primary products for the needs of the populace. Taking into account everything we have learned about the SARS-CoV-2 virus so far it comes as a surprise that there hasn't been a more intense scientific debate on whether the blind lockdown model, implemented by most national governments, was truly an appropriate response to the challenges posed by the pandemic (1, 2). Today, when we know more about the transmission modes of SARS-CoV-2 (primary mode is by respiratory droplets) as well as how dangerous it truly is (much less than previously thought), it is time to reassess the first radical epidemiological reactions (3, 4, 7). This needs to be done not to accuse someone of mistakes, but in order to plan future action. It is clear that in the beginning numerous countries opted for radical epidemiological measures because we didn't have enough information about the COVID-19 pandemic but now the time has come to ask the questions about the weirdly mingled responsibility of politicians and epidemiologists who persist in scaring the populace with threats of the virus without considering the general consequences (5, 6, 7). Individuals who bravely provoke the world scientific community by in-

sisting on a discussion based on data and not assumptions are actually very rare.

**Keywords: coronavirus pandemic, human community, epidemiological measures.**

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### Medical, Social and Ethical Dilemmas in COVID-19 Times: How to Decide Who and What to Do?

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#### ABSTRACT

**Background and Objective:** After almost of one year when the first case of COVID-10 infection was discovered and recorded in Wuhan Province in China, Pandemic of

COVID-19 is still full of prejudices and dilemmas (1). No one serious Evidence Based Study in the scientific literature has been described. Author of this article was one of the first 100 authors in the world which paper was deposited in PubMed database in March of the 2020 (1). Currently in PubMed are deposited more than 5000 papers with subject of COVID-19 published in journals in almost every country in the world by authors from almost every medical and submedical disciplines. Everyday in the world somebody organizing some Special Topic Conference, mostly as webinars, within the every scientific medical field where biomedical scientists and experts trying to contribute with scientific and important facts and experiences, according pandemic of COVID-19 infection and possible solutions how to stop consequences of the pandemic globally. Unfortunately, all measures proposed by experts of World Health Organization (WHO) and Regional and National Scientific and Public Health Institutions in the world are not enough effective (2-5). Till now number of infected and died people caused by COVID-19 is more than 50 million cases. Author's of this paper written in February this year and published in *Materia Socio-Medica* journal about three dilemmas are still active, better to say, much more intensive than 6 months ago (1).

**Methods:** This review has descriptive character with intention to summarize current important facts about COVID-19 pandemic and most important dilemmas described in scientific literature until today.

**Results and Discussion:** The novel coronavirus (COVID-19) pandemic day by day raising with more and more medical ethics dilemmas. In a pandemic conditions public health institutions (like Ministry of Health, Public Health Institute) have responsibilities and considering who and when drive decisions on prioritizing who is or will be tested for COVID-19 disease (dilemma 1 in Bosnia and Herzegovina). Rationing as the supply of key resources such as ventilators has been outstripped by the number of hospitalized COVID-19 patients (dilemma 2 in Bosnia and Herzegovina). The severest form of COVID-19 includes pneumonia, which can require admission to an highest healthcare protection institutions, like University Clinical Centers or Cantonal hospitals for mechanical ventilation. Medical (COVID-19 ambulances/surgeries, medical staff (physicians, nurses, etc.), corona tests, etc) utility based on scientific patient profiles should guide decisions to ration critical care resources such as ventilators.

Described experiences in the scientific literature, as current most important dilemma, regarding COVID-19 pandemic are (2): a) **Treatment:** In all countries in the world caring for the anticipated surge of seriously ill COVID-19 patients is likely to involve heart-wrenching decisions for healthcare professionals. The first step in managing critical care resources is screening out patients who are unlikely to need critical care and urging them to self-quarantine at home; b) **Testing:** There has been rationing of COVID-19 testing since the first novel coronavirus patient was diagnosed and the primary purpose of testing

during a pandemic is advancing public health (purpose of the test is pure public health epidemiology keeping track of who has COVID-19 in service of trying to limit the spread of the disease to other people). In that case the prioritization isn't so much about who is at greatest risk, and who is more likely to interact with lots of people, or to have interacted with more other people; c) **Healthcare professionals (family physicians, infectologists, epidemiologists, medical nurses, patronage nurses, and other health workers):** The COVID-19 pandemic involves competing obligations for medical professionals. They have a set of obligations that inclines them to go to work when they get the call. On other side they, also, have own interests, don't want to get sick working at risk places with possibly already infected patients. And, they can incline them not to work. The punchline is there is an ethical consensus that they have a prima facie duty to work because of everything that has been invested in them (2), because of their unique position where not just anybody can replace them, Community/society looks to them to serve this function, and because they went into this profession and are expected to go into work. The obligation of medical professionals to show up for their jobs is not absolute (2). If hospitals don't have personal protective equipment, they are in no position to tell their staff to show up and work. If a hospital cannot provide even a basic level of safety for their employees to do their job, then they are turning their hospital not into a place to treat patients; d) **Vaccine:** Vaccine against COVID-19 is still in phases of testing and not available yet for official and large treatment (8). But when becomes available, Governmental bodies, healthcare decision makers, public health officials, and healthcare providers will face rationing decisions until there is sufficient supply to treat population. The question is, when the vaccine comes out, who will be in the first group: a) to want to prioritize are healthcare workers, who are at risk of getting infected by doing their jobs and saving lives; b) to want to prioritize people who serve essential functions to keep society going—the people who keep the water running, the lights on, police, and firefighters; c) to want to start looking at the high-risk groups (old people, patients with chronic diseases, etc) (1, 8).

Scientists who are interesting with health ethics speaking (Cheney K, 2020 (3), Bustan S. et al., 2020 (2)); about most important ethical dilemmas: a) **Responsibility:** Can medical responsibility change in times of pandemic? b) **Fairness:** In times of emergency, scarce healthcare resources, and risk of infection to the medical staff, how do we decide where we draw the line of whom we treat, who will live and who will die and how to ration treatment without denying care (triaging resources)? c) **Dignity:** Does the need for increased awareness of public harm in a pandemic justify impinging on patients' rights to bodily and personal dignity and privacy? d) **Honouring death:** Does public interest in social distancing outweigh the patient's right not to die alone and the family's right to be with their dying relative? (3, 4).

The challenging questions raised here are intended to reinforce our ethical values and speak of the well-being of the sick human being, the dignity of the dead person, and refer to a patient as a person to be cared for rather than a critical case or a contaminating agent. And while the coronavirus continues to widely spread across the globe, we hope that our discussion can serve as a resource for advanced care planning, helping medical providers and other specialists to consider the shared important aspects of medical ethics in times of great uncertainty.

Neves N. et al. written the text with interesting approach: *Ethical dilemmas in COVID-19 times: how to decide who lives and who dies?* (6), and they noticed that the pandemic reduction was not a priority for the US government, and many other opulent countries did not prepare adequately for it, so that the enormous responsibility to confront it befell on the medical providers. This imposed on them an uneven focus on present day patients, rather than the actual and prospectively sick. If we speak of fairness, we state that reducing the pandemic risk is a global public good inscribed in a complex temporality. a) Who gets healthcare resources? b) Can it be based on meritocracy, age, or function? c) Can we apply the same principles to all COVID-19 and non-COVID-19 patients? d) How to prioritize access to healthcare? (6). But during a pandemic, which is a natural and societal threat, we are facing the fact that rules can be consistent only if the context of disruptions of my narrative representations, my narrative world, can remain a consistent world as well.

From an ethical perspective, it can be argued that value judgment is an attempt of judgment based on a careful evaluation of the information available, taken as incomplete and evolving. It is worth exemplifying a value judgment on how to proceed in a medical emergency. In this case, the quality of judgment is incomplete since it is the result of cultural or personal limitations. Valuation is essential as an element for the contextualization of ethics in its broadest sense. Ethics is shaped based on the ingraining of values in subjects and the society in which they are inserted, and, from this set, each one proposes their actions. That being said, it is necessary to value to intervene. It is worth noting that the medical field assigns a different value to life, according to age, providing distinct care to children, adults, and the elderly. From this perspective, the ethical values necessary to ration healthcare resources in an epidemic have high prestige and can converge into some proposals based on fundamental values, such as maximizing the benefits produced by scarce resources, treating people equitably, promoting and recommending instrumental values, and giving priority to critical situations. A recently published article taking into account the ethical particularities mentioned produced specific recommendations to allocate medical resources in the COVID-19 pandemic proposed by Neves N, and associates (8) are: "a) Maximize benefits—the priority of limited resources should aim at saving as many lives as possible and maximizing improvements throughout life post-treatment. This premise is consistent both in the

perspective of utilitarian and non-utilitarian ethics; b) Prioritize health professionals—resources such as tests, PPE, ICU beds, ventilators, therapeutics, and vaccines should be directed initially to healthcare professionals, particularly those who face a high risk of infection and whose training makes them difficult to replace, which can cause insufficient assistance and, as a result, an increased number of deaths due to the decreased number of trained professionals; c) Do not allocate based on the order of arrival—in case of patients with a similar prognosis, the operationalization should be random. Prioritizing those who arrived first would be unfair; d) Be sensitive to the scientific evidence—protocols must follow scientific guidelines and be updated as they develop; e) Reward research participants—people who participate in research to prove the safety and effectiveness of vaccines and therapeutic measures should receive some priority in interventions; and f) Apply the same principles to all COVID-19 and non-COVID-19 patients—the fair allocation of resources that prioritizes the value of maximizing benefits applies to all patients who need them" (8).

It is necessary to implement policies of rationing in order to balance multiple ethical values. Naturally, there will be different judgments in different circumstances, but it is essential to maintain transparency to ensure public trust. It is possible to draw up prioritization guidelines using well-established ethical values and recommendations to achieve fair procedures for resource allocation. That way, it is possible to prevent individual physicians from being faced with the grim task of improvising.

The goal with clinical ethics support is to enable clinicians and health service decision-makers to think more clearly about complex ethical questions...

**Conclusion:** The pandemic or epidemic of COVID-19, unlike all previous epidemics or pandemics in the recent history of medicine (1), has brought many controversies about which the future and its actors in several scientific fields of interest will provide relevant observations, opinions and conclusions. Among other things, there is controversy regarding vaccines and vaccinations against Corona infections (9). But there are many other controversies and doubts which relate to life, work, health in general and the health systems and its subsystems, and are responsible for ensuring the work, as well as, all other activities of the individual and the community. In the use and misuse of all types of information, and they are mostly health information, the autocratic manner of dealing with decisions at all levels in the health care system (but also in society and politics in general) came to the fore, which fundamentally „transformed“ the normal system functioning - from local levels in Family Medicine units to those at the tertiary and quaternary level, where the hypertrophy of COVID-19 and its consequences „distorted“ the health system into forms that are not seen even in the most specific conditions, the so-called extraordinary conditions, such as states of war and catastrophic natural disasters. This prompted the authors of this article to emphasize the significance and importance

of the phenomenon of fear for life or fear of death, which, among other things, has intensified precisely with what has been said in the previous text. We should especially emphasize the ethical moment related to all information about COVID-19, which „kills“ us every day and produces fear tendentiously, irresponsibly, but also out of ignorance, which has not been a mass phenomenon so far. Every news in the media, television shows, from current daily news to educational content, on social networks has partial characteristics of unethical and immoral behavior - data on individuals, text and photographs were published, which in codes of ethics and declarations of rights and charters have the character of violations and bear the traces of criminal liability. Legal experts, lawyers and other law enforcement experts are already being called to file lawsuits and criminal charges for the health consequences of COVID-19 for individuals and their families, from the unnecessary wearing of masks, irrational purchase of food and medicine and the creation of unnecessary piling of supplies in homes, preventing regular control, diagnostic and therapeutic procedures at higher levels of health care, denying various physical rehabilitation procedures and treatments, especially to the elderly, who were and will be the primary risk group and potentially most at risk of COVID-19.

“The phenomenon of fear is otherwise present in this category of the population, due to those conditions and diseases from which they otherwise suffer, and which occurred both physiologically and pathophysiologically with age. COVID-19 and this kind of relationship that this text write about only intensified that fear even more. Perhaps this is one of the „determining tendencies“ of the COVID-19 project, as psychiatrists would point it out, and which will be one of the important topics for future research” (9). The term PCSS (Post Corona-virus Stress Syndrome) which I proposed to be used for consequences of “corona time” several months ago every day is stronger and stronger, Reason way even common peoples know (1).

**Keywords: COVID-19, prejudices, dilemmas, vaccine.**

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## The Importance of Nutrition in Boosting Immunity for Prevention and Treatment COVID-19

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#### ABSTRACT

**Background:** Life and health directly depend on food and normal digestive system functions, as well as eating habits. Absorbed essential and beneficial nutrients from food are used by all human organic systems to maintain their functions for the purpose of maintaining health. The immune system resists harmful agents from the environment, such as viruses and bacteria, by raising the level of its activity during infection. Such activity requires an accelerated metabolism. Increased metabolic activity requires more intense energy sources and specific substrates for biosynthesis of regulatory molecules and activation of cellular and biochemical elements of immune defense. Adequate food choices and a wide range of nutrients are necessary to maintain optimal immune system function, and this is a prerequisite for an adequate response to prevent more severe clinical forms of COVID-19 disease. In the fight against the COVID-19 pandemic, little attention is paid to strengthening the natural abilities of the human body and its immune system to prevent entrance of the human SARS-CoV-2 virus, and to prevent its replication in the vital organs cells. There is scientific evidence that lifestyle and diet modification with nutritional interventions can strengthen the immune system and thus prevent and mitigate the pandemic spread of this disease. **Objectives:** The goal of this article is to evaluate new findings on the impact of food, specific nutrients and eating habits on immune system function during the COVID-19 pandemic. **Methods:** The available literature was analyzed using the key words: food, immune system, COVID-19, and the results of studies that have scientific evidence (EBM) for the positive impact of food on the activity of the immune system during this disease were summarized. **Results and Discussion:** Food, diet and digestive function play the most important role in the overall immune response to viral infections. It has been proven that the active ingredients of food can

strengthen or weaken the immune system (immunomodulation or immunosuppression). In addition to providing energy needs in preserving life and health, food also has an emotional, psychological and social function. The psychological, social and emotional function of food can directly affect the control of stress, stabilization of the emotional and psychological state of the patient, which is an important factor for maintaining a stable immune system. Some food ingredients destroy or inhibit various microorganisms in direct contact. This action is performed by destroying the phospholipid membrane, inhibiting enzymatic reactions or acting on the genetic structure of microorganisms. Another way is to act through the immune system and various biochemical mechanisms. Dietary supplements are often used to boost immunity. The needs for food supplements should be individualized and harmonized with the immunomodulatory properties of individual products, and the assessment of the nutritional status of the consumer. Organic balanced food adapted to each person (personal diet) is the first condition for creating an adequate natural defense system. An adequate immune response, regardless of food choice, depends on food consumption habits and control of all 5 functional stages of digestion. Each of these phases is controlled with the nervous system of the digestive tract and the brain. Any disorder in this whole process can lead to metabolic disorders, insulin resistance, diabetes and other immune autoimmune diseases. Such disorders weaken the immune response to viral infections, so an increased incidence of COVID-19 has already been proven in persons with increased weight, hypertension, diabetes and autoimmune diseases. The strongest natural first line defense is the healthy mucosa of the initial parts of the respiratory and digestive systems. Eyelashes and mucus on the surface contain substances such as lysosome and antibodies from the IgA group. The mucus also contains glycoproteins - mucins that can bind viruses to their structure by imitating ACE receptors and remove them from the body in the form of mucus. These mucosal immune structures depend on the adherence of important food ingredients such as vitamins, minerals, proteins, and essential fatty acids. Disorders in the immune function of the intestines and microbiome were registered during the COVID-19 pandemic. There are studies that recommend the standard use of prebiotics and probiotics in the prevention and treatment of COVID-19 disease. Some probiotic cultures have the ability to act in the ACE receptor region by inhibiting virus entry into cells. A link between lung microbiome and gastrointestinal tract with a synergistic immune response and prevention of bacterial lung superinfection has also been demonstrated. There are indications that the COVID-19 pandemic also came as a result of the weakening of the immune system of the entire human race due to changes in diet that occurred in the 21<sup>st</sup> century. Until 50 years ago, man ate mostly organic food without additives. The current global characteristic of the diet is that food is produced in conditions of contaminated soil, air and water. Food is taken in supermar-

kets, mostly industrially ultraprocesed and with many additives, preservatives and sugars. Genetically modified food directly impair the human DNA genome and has a direct negative impact on the function of the immune system. The consequences of such a diet are today's pandemics of obesity, insulin resistance, metabolic syndrome, diabetes and other chronic non-communicable diseases, which have greater destructive powers for human life than the SARS-CoV-2 virus itself. Food antioxidants control DNA transcription, cytokine production and secretion, and cell vitality. Phenols and carotenoids from food, which are most often antioxidants, can act on the regulation of all functions of the immune system.

**Conclusion:** There are many types of foods that can affect the immune system in the human body, for which proven facts exist (EBM). Examples are: vitamins A, B, C, D and E, minerals selenium, zinc, iron and copper, omega 3 fatty acids, salicylates, carotenoids, polyphenols, flavonoids, glycosides and alkaloids. They have specific pharmacological effects in human health such as antimicrobial, antioxidant, anti-inflammatory and immunomodulatory. Some food nutrients are very valuable in maintaining a healthy immune system, and can be found in everyday foods, such as sea fish, berries, leafy vegetables, legumes, bee products, mushrooms, algae, herbs and spices. There is also evidence that this approach to nutrition can prevent COVID-19 disease or alleviate its clinical course, and accelerate the process of creating and maintaining specific immunity.

**Keywords:** Nutrition, immunity, COVID-19.

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### COVID-19 Pandemic: Psychiatric and Neurological Consequences

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## ABSTRACT

**Background:** Infection with the new corona virus (SARS-CoV-2) was first registered in December 2019 in China, and then later spread rapidly to the rest of the world. On December 31, 2019, the World Health Organization (WHO) informed the public for the first time about causes of pneumonnia of unknown origin, in the city of Wuhan (Hubei Province, China), in people who were epidemiologically linked to a seafood and wet animal whole sale local market in Wuhan. Coronavrus disease, called COVID-19 (Corona virus disease 2019), after China quickly spread to most countries in the wold, and the WHO on March 11, 2020 declared a pandmic with this virus (1). In Bosnia and Herzegovina, the first infected infected person was registered on 5.3.2020 in Banja Luka, and in the Federation of Bosnia and Herzegovina on March 9, 2020 in Konjic. Aim: To present some of psychiatric and neurological consequences of infection related to the SARS-CoV-2. Methods: Article has an analytical character and review of literature. Results and Discussion: SARS-CoV-2, has a high level of sequential similarities to the SARS-CoV-1 and uses the same receptors when it enters the human body (angiotensin-converting enzyme 2/ACE2)(2). COVID-19 is respiratory infection that is primarily transmitted via respiratory droplets. Typical symptoms of COVID-19 infection can be very moderate (infected can be even asymptomatic) to very severe, with severe respiratory symptoms (bilateral severe pneumonia), septic schock, and fatal outcome. COVID-19 is primarily a disease of the respiratory system, but SARS-CoV-2, in a number of patients also penetrates the CNS, and apparently could be responsible for fatal outcome in some cases (3,4-5). Experiments on mice have demonstrated that SARS-CoV probably enters the brain via the olfactory bulb, and then spreads to other specific parts of the brain such as the thalamus and brainstem through the olfactory nerves. Furthermore, there is evidence that coronaviruses attack peripheral nerve endings and reach the CNS via nerve synapses (4). The entry of the virus into the brain can lead to neurological and psychiatric manifestationss, which are not uncommon, including headache, anosmia, ageusia, encephalopathy, encephalitis, paresthesia, myalgia, Guillain-Barre syndrome, impaired consciousness, confusion or delirum and cerebrovascular diseases (3, 6). Due to the fact that iformation about the diseas caused by SARS-CoV-2 (COVID-19) spread very quickly, becoming pandemic even before the virus pandemia (infodemia), and after the disease spread outside China, confirming the remarks that it is very contagious disease, but also a fatal disease, the general public has become very upset (7-8). Psychosocial consequences as well as consequences for mental health are significant, both for the general population and especially for health workers of all profiles. Covid-19 pandemic is associtaed with negative psychosocial outcomes, including depressive sympotms, anxiety,

anger and stress, PTSD, social isolation, loneliness and stigmatization (3, 9-10). Conclusion: The consequences of this pandemic on the overall life of people on the planet are significant and unthinkable. COVID-19 is primarily a disease of the respiratory system, but SARS-CoV-2, the RNA virus that causes the disease, in a number of patients also penetrates the CNS, leading to serious neurological disorders, and apparently it is also responsible for mortality. The entry of the virus into the brain can lead to neurological and psychiatric manifestationss, which are not uncommon including headache, anosmia, ageusia, encephalopathy, encephalitis, paresthesia, myalgia, Guillain-Barre syndrome, impaired consciousness, confusion or delirum and cerebrovascular diseases. Psychosocial consequences as well as consequences for mental health are also significant, both for the general population and especially for health workers of all profiles.

**Keywords:** COVID-19, Neurological disorders, Psychiatric consequences.

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## Organ Transplantation in Bosnia and Herzegovina Within Limiting Circumstances Caused by COVID-19 Pandemic.

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### ABSTRACT

**Introduction:** Organ transplantation at the time of the COVID-19 pandemic is very difficult to realize in all aspects of this method of treatment. Difficult communication, limited possibilities of diagnosis and accommodation, treatment and monitoring of patients-special conditions and procedures for testing, processing and treating patients have been created. **Objective:** The aim of the study is to analyze and describe the current situation about organ transplantation in Bosnia and Herzegovina, regarding limited conditions caused by COVID-19 pandemic and to propose adequate measures to solve the current problems. **Methods:** Data on the status of the transplantation program from the European Register of ERA-ADTA as a special contribution from 36 European countries and 17 other countries associated with ERA-EDTA was analyzed. Data from the Renal Registry of the Association for Nephrology, Dialysis and Transplantation in Bosnia and Herzegovina was also collected. the latest data on dialysis and transplant patients at the end of September 2020. A special organizational problem of organ transplantation in our country was pointed out. The Ministry of Health of the Federation of Bosnia and Herzegovina has prescribed the conditions and ordered the continuation of the transplantation process in the conditions of the Covid-19 pandemic beginning of May 2020. **Results:** The total number of transplants was reduced in the period from March to the end of September 2020, according to the official registers of transplantation centers in Eurotransplant. No organ transplants were performed in Bosnia and Herzegovina at that time. Forty dialysis patients who tested positive for Covid-19 from all over Bosnia and Herzegovina were monitored. Of that number, 5 died. In the time when there was no pandemic, there were no donors in our country with proven brain death in three years period before the start of pandemic, and therefore no organ transplantations were performed. Numerous in field procedures are needed to improve, mainly by educating the population about the importance of transplantation, medical workers, and the medical authorities that are most responsible. The donor network in Bosnia and Herzegovina is significantly more active in assisting

transplantation in our country in comparison to other countries. Organ transplantation should have a state priority and harmonized procedures between all levels of government. At present, there is no co-operation in this process between different levels of government, and Bosnia and Herzegovina does not have a single joint body or commission to deal with all aspects of this process. Republika Srpska and the Brcko District of Bosnia and Herzegovina do not even have a waiting list for patients who may receive organs with proven brain death. The waiting list in the Federation of Bosnia and Herzegovina includes 242 patients for kidney, 30 for liver and 12 for heart transplantation. **Conclusion:** The number of organ transplants in all European countries in the context of the Covid-19 pandemic has been significantly reduced. No organ transplantation were performed in Bosnia and Herzegovina since March. The transplant process must continue according to new procedures and is based on testings for Covid-19 infection.

**Keywords:** kidney transplantation, Covid-19 pandemic, ERA-EDTA Renal Registry.

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## The Elective Diagnostic Laparoscopy in Chronic Abdominal Disorders in Pandemic Conditions

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## ABSTRACT

**Background:** The first diagnostic laparoscopy on humans was performed in 1910. Initially, this method was mainly used by gastroenterologists. Since 1980, after the first laparoscopic surgeries, such as appendectomy, cholecystectomy, etc., surgeons have taken a leading role in the application of diagnostic laparoscopy (1-3). **Objective:** Indications for elective diagnostic laparoscopy can be divided into two basic groups: indications due to benign pathological conditions in the abdomen and indications due to malignant tumors, for biopsy and determination of their clinical stage as a prerequisite for proper therapy (4-6). In this study, we evaluated the use of elective diagnostic laparoscopy in our patients with chronic abdominal diseases and its importance in the proper treatment of patients. **Methods:** We analyzed patients who were admitted to the Surgery Clinic in the period 2015-2019 for elective diagnostic laparoscopy due to chronic abdominal diseases. It was not possible to diagnose the disease with other diagnostic tests. All patients were examined and all available diagnostic processing was performed. The decision for diagnostic laparoscopy was made at the Council for Digestive Diseases. **Results:** A definitive diagnosis was made in all patients who underwent diagnostic laparoscopy. In patients with chronic pain, it was most often chronic appendicitis, and appendectomy was performed in these patients. In all oncology patients, a tumor fragment was taken for definitive pathohistological analysis. Based on the definitive pathohistological analysis, further treatment of the patients was determined. In half of the patients, the diagnostic laparoscopy was at the same time therapeutic and was performed with the definitive treatment of the patient. **Discussion:** Diagnostic laparoscopy plays a significant role in the evaluation of chronic abdominal pain, especially in lower right quadrant pain in young patients (6, 7) In oncology patients with intra-abdominal tumors, preoperative diagnostic laparoscopy is often indicated to assess tumor operability (6-8). During diagnostic laparoscopy, it is possible to take a tumor biopsy directly under the control of a laparoscope, it is possible to take ascites for cytological processing, or to do peritoneal lavage and process the contents cytologically (6, 7, 9-11). In the hands of an experienced laparoscopist, diagnostic laparoscopy is a safe method for making a diagnosis. Its advantages are that it can be immediately therapeutic and the problem can definitely be solved (5, 6, 10).

**Key words:** diagnostic laparoscopy, chronic abdominal disorders.

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## Organization of the work of the Medical Institute Bayer in Tuzla during the COVID-19 pandemic

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## ABSTRACT

Medical Institute Bayer is a continuation of the BH Heart Center Tuzla, which was founded in 2008. The goal of establishing the Center was to build a modern, functional hospital that will meet all prescribed norms and standards, and eliminate all limiting factors in the development of cardiac surgery, interventional cardiology and vascular surgery. As part of the development of the Center and the new concept of operation, and in order to cover all new disciplines as well as those that will be developed in the future, in January 2020 the name of the institution was changed to Medical Institute Bayer - MIB. MIB was named after Dr. Karel Bayer, one of the most important figures in the field of medicine and the first president of the Association of Physicians of BiH in 1909. The first contact of the MIB with the coronavirus pandemic was recorded at the end of March this year with one of the employees. Shortly afterwards, 7 new cases were recorded, after which the MIB was placed in a state of iso-

lation, both for the patients and the employee. After the MIB was emptied, the rehabilitation of the facility began, which included measures of intensified disinfection of the entire institution, all rooms, all vehicles of the center and access roads, after which the MIB was put in a state of so-called "vacation facility", lasting 15 days. All MIB employees were tested for COVID-19 before re-entering the facility. Employees who entered the MIB after testing, were required to have personal protective equipment (mask, gloves, etc.) and all in accordance with the recommendations. Upon entering the Institution, they crossed the disinfection barrier and disinfected their hands with a disinfectant placed at the entrance to the Institution. Patients with symptoms of the underlying disease, before arriving at the MIB with the necessary medical documentation, are required to provide evidence that they have been tested for COVID-19 infection. Prior to patient entry, authorized staff at the triage point perform patient triage measures, complete an epidemiological form for each patient, and measure body temperature. The patient who then enters the MIB is obliged to have personal protective equipment (mask, gloves, socks). COVID-19 positive patients are treated as life-threatening-extremely urgent patients (since there is no possibility of testing). From entering the Institution to leaving it, it is obligatory to act according to the Protocols for the treatment of COVID-19 positive patients. If COVID-19 infection is confirmed in these patients, those patients are transferred to the so-called COVID ward, after which preventive intensive disinfection of the rooms in which the patient stayed is performed. The protection of staff is clearly defined by a special protocol for the admission and treatment of patients during a pandemic, which clearly defines the necessary protective equipment, rules for dressing and undressing, as well as rules for working in special conditions such as operating rooms.

**Keywords:** Medical Institute Bayer, COVID-19 pandemic.

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## Physical Activity Outdoors as an Alternative to Lockdown: the Three Cs Strategy

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#### ABSTRACT

**Background and Objective:** The focus of the COVID-19 pandemic is on protection of physical health, but its influence on mental health may in the future prove to be an even greater challenge for public health globally, as rightly emphasized in March by Masic et al. in *Medical Archives* (1). Mental problems are aggravated due to the enormous stress and anxiety caused by the pandemic itself, but also to the progressing restrictions, leading to lockdown in many countries. The Great Barrington Declaration (2), signed by many experts, draws attention to the devastating short- and long-term effects of the lockdown policy, especially in the most disadvantaged groups. Its signatories advocate Focused Protection, where senior citizens and other high-risk groups are strongly protected, but all the others resume life as normal. The Declaration, however, was criticized by some other health professionals (3), who argued that controlling community spread of COVID-19 is necessary. I have attempted to develop an alternative coronavirus strategy that could be a golden mean between the two opposing views. In my opinion, a major problem now is that lockdown, which forces many people to stay at home with their families most of the time, is – paradoxically – against the official advice for the public issued by the World Health Organization (4). One of the main WHO recommendations is to avoid the 3Cs: spaces that are closed, crowded or involve close contact (6-12). The "stay home" policy seems necessary to decision-makers, but I am afraid that it may bring opposite results now, because lockdown in autumn and winter is likely to facilitate disease transmission among family members more strongly than in spring, due to poor ventilation. **Results and Discussion:** Summary and further reading: 1. Editor of EASE Guidelines for Authors and Translators of Scientific Articles to be Published in English [www.ease.org.uk/publications/author-guidelines](http://www.ease.org.uk/publications/author-guidelines), Bosnian translation by Prof. Izet Mašić: [https://www.ease.org.uk/wp-content/uploads/2018/11/doi.10.20316.ESE\\_2018.44.e1.bos\\_.pdf](https://www.ease.org.uk/wp-content/uploads/2018/11/doi.10.20316.ESE_2018.44.e1.bos_.pdf) 2. Campaign "Help scientists save time for research" thanks to simplification of editorial requirements for initial manuscript submission <https://ese-bookshelf.blogspot.com/2020/10/ease-council-post-sylwia-ufnalska-on.html> 3. Outcome of lockdowns: "Basic epidemiological theory indicates that lockdowns do not reduce the total number of cases in the long run and have never in history led to the eradication of a

disease. At best, lockdowns delay the increase of cases for a finite period and at great cost." Comment to Great Barrington Declaration <https://gbdeclaration.org/frequently-asked-questions/> 4. Physical activity outdoors as an alternative to lockdown: the Three Cs Strategy. *Medical Archives* 2020 Oct; 74(5): 399-402. <https://www.ejmanager.com/mnstemps/10/10-1604859731.pdf?t=1604903670>, doi: 10.5455/medarh.2020.74.399-402 "The suggested solutions – eg encouraging regular physical activity outdoors (also for symptomless quarantined people), frequent ventilation with fresh air, and more careful use of antipyretics – can markedly help to reduce the rate of transmission of this disease. The new strategy is also likely to lower the risk of mental disorders and various diseases, thanks to promotion of a healthy lifestyle." 5. Strolls as a form of relax and disease prevention: German book "Body2Brain" (Kösel-Verlag) by Claudia Croos-Müller, a neurologist and psychotherapist. See also videos (in German): <https://www.youtube.com/watch?v=K2gGRvzRpV0> and <https://www.rfo.de/mediathek/video/der-body2brain-weg-mit-dr-claudia-croos-mueller/> 6. Health benefits of amateur gardening: "reductions in depression, anxiety, and body mass index, as well as increases in life satisfaction, quality of life, and sense of community" according to Masashi Soga, Kevin J. Gaston, Yuichi Yamaura. 2017. Gardening is beneficial for health: a meta-analysis, *Preventive Medicine Reports* 5: 92–99, <https://doi.org/10.1016/j.pmedr.2016.11.007> Moreover, gardening in cities (community gardens, also on rooftops, increasing permeable surfaces for better tree growth, etc.) can help to increase water retention and improve urban climate, see eg <http://vikalpsangam.org/article/nature-to-reign-in-floods-in-gorakhpur/#.X63Z9d5KiM8> 7. Flora of cemeteries: eg <https://www.researchgate.net/scientific-contributions/Aneta-Czarna-2041166206> 8. Respect for nature, need for biodiversity preservation. Visually about biggest threats to biodiversity: <https://www.visualcapitalist.com/biggest-threats-to-earths-biodiversity/?fbclid=IwAR1GDcP1p6mZVBSiulino5wppnLDyF0nmYWIaxO37Tk6s4U6mPbBhTVu7W0> 9. Benefits of forest kindergartens: improved immunity, self-confidence, improved brain function, etc., see [https://en.wikipedia.org/wiki/Forest\\_kindergarten](https://en.wikipedia.org/wiki/Forest_kindergarten) Emma Marris "we have to let children touch nature, because that which is untouched is unloved" [https://www.ted.com/talks/emma\\_marris\\_nature\\_is\\_everywhere\\_we\\_just\\_need\\_to\\_learn\\_to\\_see\\_it/transcript#t-940244](https://www.ted.com/talks/emma_marris_nature_is_everywhere_we_just_need_to_learn_to_see_it/transcript#t-940244). **Conclusion:** Basing on scientific evidence, the solutions suggested here – such as encouraging regular physical activity outdoors (also for symptomless quarantined people), frequent ventilation with fresh air, and more careful use of antipyretics – can markedly help to reduce the rate of transmission of COVID-19. I hope that this outline will be discussed and refined in the future, to improve public health worldwide. I am very grateful to all the researchers who provided the available scientific evidence as well as my family members and friends who

have discussed it with me. All this has greatly contributed to development of this strategy. As explained in my earlier article (13), close cooperation is urgently needed now, so we must focus on searching for solutions, rather than for people to be blamed. I wish the present terribly difficult situation would lead not only to human suffering but could also urge us to change our priorities and show more respect for other people, our own organisms, the beauty of nature, and our Creator.

**Keywords: the Three Cs Strategy, Physical Activity Outdoors.**

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## “SWEP 2020” CONFERENCE: “Study Design and Editing of Medical Journals” ABSTRACTS

### The Basic Principles of Editing Biomedical Scientific Journals

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#### ABSTRACT

**Background:** There is great need to improve editing of medical journals, both on regional and global level (1-3). **Objective:** The aim of our article was to establish main principles of editing biomedical scientific journals based on evidence found through systematic search of scientific literature (4-9). **Methods:** The evidence for writing this Guideline was systematically searched for during June 2020 in the PUBMED and GOOGLE SCHOLAR databases. The inclusion criteria were: original studies, systematic reviews, invited expert opinions, guidelines and editorials. The exclusion criteria were narrative reviews and un-invited opinion articles. **Results:** In total 11 recommendations were made, based mostly on A and B class of evidence. The editors should educate potential authors and instruct them how to structure their manuscript, how to write every segment of the manuscript, and take care about correct use of statistical tests. Plagiarism detection softwares should be used regularly, and statistical and technical editing should be rigorous and thorough. International standards of reporting specific types of studies should be followed, and principles of ethical and responsible behaviour of editors, reviewers and authors should be published on the journal's web site. **Conclusion:** Evidence-based principles of editing biomedical scientific journals should be followed by chief editors of the journals as a prerequisite of the journals' quality improvement.

**Keywords:** scientific journals, editing, publishing, basic principles.

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## The Importance of Adequate Research Design in Biomedicine

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### ABSTRACT

**Background:** Recent studies have showed that large proportion of published research in biomedical journals suffer from methodological errors that question validity of the results (1-4). **Objective:** The aim of this article was to direct attention of potential researchers to key elements of adequate research design. **Methods:** This Editorial contains description of five most important steps and phases which are obligatory to use in process of making of the appropriate and qualitative research design for providing study investigation in biomedical research (5-7). **Results and Discussion:** Designing, i.e. planning a study in biomedicine has five essential stages that has to be completed if one wants to avoid methodological errors. The first stage is setting research question with three parts: independent variable, dependent variable (outcome) and study population. More detailed determination of the study population with inclusion and exclusion criteria is a second stage. The third stage is calculation of the study sample size and choice of sampling method. Closer description of the study variables with accent on methods of their measurement is the following step, and the final one, fifth stage, is deciding whether the study will be experimental, undertaking control of confounding variables, or observational, with just registering and following the confounders. **Conclusion:** If all five essential steps are completed avoiding introduction of any kind of bias, the study that was designed will be most likely free of critical methodological errors.

**Keywords:** Research design, Biomedicine, Bias, Research methodology.

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## Predatory in Scientific Publication - a Burning Issue in Science

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### ABSTRACT

**Background and Objective:** Predatory publishers and journals, and so-called hijacked or fraudulent journals, are threats to the quality of published articles and waste valuable research and manuscripts when scholars and authors submit and publish their works in these journals. The aim of the study is to identify the features of fraudulent or fake journals, to increase the awareness and warn scholars, especially young researchers, how to recognize and avoid submission of their manuscripts to these journals. **Methods:** Exploring the web blog of Jeffrey Beall and debate about Beall's list of predatory publishers and journals and review of the relevant published literature retrieved from PubMed and trustable Internet sources, as well as personal experience and observations of the author. **Results:** Jeffrey Beall, an American librarian and library scientist from Denver, University of Colorado, has drawn attention to "predatory open access publishing" and created widely known Beall's list, a list of potentially predatory open-access publishers and journals publishing submitted manuscripts promptly without the reviewing process and with a high rate of publication fee. The OMICS International and the "Journal of Forensic Anthropology", renamed in "Journal of Anthropology Reports" are the true examples of predatory publishers and predatory journals. The debate initiated by Jeffrey Beall is continuing in the scientific community with increased number of authors and published articles on this still unresolved issue in the last about 10 years. The features of fraudulent or fake journals, threats and consequences presented by other authors have been discussed as well. **Conclusion:** Unaware of the detrimental effects associated with publishing in disreputable journals, inexperienced researchers can fall victim to those journals. So far the efforts are directed toward increasing awareness in the scientific community how to differentiate between trustworthy and reliable journals and predatory ones, as well as the authors and readers to avoid and completely boycott predatory journals. Continuous education of authors, both the existing and the newly-emerging wave of scholars, must be the

purpose and the imperative of the academic community. In order to protect the peer review process as a heart of the scientific publishing, the academic and scientific community must set the criteria for scientific advancement by not recognizing and valuing the articles published in the predatory journals.

**Keywords: predatory publishers, fraudulent journals, hijacked journals, open access.**

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**DAYS OF THE ACADEMY OF  
MEDICAL SCIENCES OF BOSNIA AND  
HERZEGOVINA "AMNuBiH 2020"**

**"SWEP 2020"**

**TOPICS:**

- Bosnia and Herzegovina experiences related to the COVID-19 pandemic
- Study design and editing of medical journals

**Sarajevo, Nov. 14, 2020.  
Hotel Holiday, Sarajevo**



**ACTA INFORMATICA MEDICA**  
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**INTERNATIONAL JOURNAL ON BIOMEDICINE AND HEALTHCARE**  
Founder and the First Editor-in-Chief of the journal has been Professor Jana Zemanova, Prague, Czech Republic who established this journal in the year 2013. The International Journal on Biomedicine and Healthcare (Int. J. Biomed. Healthc.) is an online journal publishing submissions in English language. The journal aims to inform the readers about the latest developments in the field of biomedicine and healthcare, focusing on multidisciplinary approaches, new methods, results and innovations. It will publish original articles, short original articles, review articles, case reports, and short format articles reporting about advances of biomedicine and healthcare, abstracts of conference submissions, case-studies and articles that explore how science, education and policy are shaping the world and vice versa, editorial commentary, opinions from experts, information on projects, new equipment and innovations...

Saturday

# 14 Nov

Hotel Holiday, Una conference hall



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**09:30-10:00** **Asim Kurjak:** Has science helped or hindered the battle with the corona pandemic?

**10:00-10:20** **Izet Mašić:** COVID-19 pandemic - dilemmas, truths and misconceptions

**10:20-10:40** **Osman Sinanović:** COVID-19 pandemic: psychiatric and neurological consequences

**10:40-11:00** **Muharem Zildžić:** Nutrition and strengthening of immunity in patients with COVID-19 infection

**11:00-11:20** **Senaid Trnačević:** Organ transplantation in BiH within limiting circumstances caused by COVID-19 pandemic

**11:20-11:40** **Emir Mujanović:** Organization of the Medical Institute „BAYER“ operation in Tuzla during the COVID-19 pandemic

**11:40-12:00** **Coffee break**

**12:30-12:50** **Sylwia Ufnalska:** Strolls and gardening: can they help to fight the pandemic?

**12:50-13:05** **Izet Mašić:** How to improve the editing of medical journals?

**13:05-13:20** **Slobodan Janković:** The importance of adequate study design application in biomedical sciences

**13:20-13:35** **Doncho Donev:** Predatory in scientific publication - a burning issue in science

**13:35-14:50** **Lunch break**

**15:50-18:00** **Short course in research design - five key components / phases:**

1. Choice of research topic
2. Choice of study type
3. Sample size calculation and sample selection
4. Selection of study variables
5. Ethics Committee and regulations

**Discussion, Conclusions, Recommendations.**

**Distribution of certificates to course participants.**