Meeting report

International Medical Forum “Ukrainian and Global Medicine: Basics, Reality, and Strategic Prospects”

Liliia Nesterovska

Danylo Halytsky Lviv National Medical University, Lviv, Ukraine

From December 13 to 15, 2023, the International Medical Forum (IMF) “Ukrainian and Global Medicine: Basics, Reality, and Strategic Prospects” was held successfully. Within the framework of this forum, the 12th Christmas Readings on Immunology and Allergology were held. The event was dedicated to the 150th anniversary of the Shevchenko Scientific Society (SSS), the 125th anniversary of the Medical Commission of the SSS, and the 25th anniversary of the Department and Center of Clinical Immunology and Allergology. Event hosts were the Medical Commission of the Shevchenko Scientific Society and Danylo Halytsky Lviv National Medical University. Despite difficult times for Ukraine, the event did not lose its leadership positions in terms of the number of speeches and the diversity of the agenda, and the vast geography of speakers and specialist attendees distinguished it. More than 400 speakers, about 1,000 listeners, and more than 1,200 online participants participated in the event. During three days, international experts from the USA, Canada, UK, Italy, Spain, Denmark, Slovakia, Sweden, Germany, Austria, and Poland, and leading scientists and experts for Ukraine delivered more than 300 speeches.

Keywords: International medical forum, Ukrainian and global medicine, 12th Christmas Readings on Immunology and Allergology.
On the first day of the “Ukrainian and Global Medicine: Basics, Reality, and Strategic Prospects” IMF, the program consisted of 5 plenary sessions: “Modern Technologies in Surgery,” “Modern Diagnostic and Treatment Technologies in Therapeutic Practice,” “Psychology and Psychiatry – Interdisciplinary Problems in Conditions of War,” “Fundamental Medical Innovations in Ukraine and the World,” “Medical Commission of the National Academy of Sciences – Through the Prism of Age”; nine symposia: “Combat Surgical Trauma,” “Current Issues of Vascular Surgery,” “Treatment of Myocardial Infarction and Stroke: Achievements and Prospects,” “Modern Approaches in the Treatment of Allergic Skin Diseases,” “Innovative Treatment Methods in Pulmonology,” “Modern Rehabilitation Needs,” “Latest Technologies in the Diagnosis and Treatment of Malignant Tumors,” “Modern Diagnostic and Therapeutic Innovations in Hematology and Oncohematology”, “Modern Challenges of Viral Infections”; 5 round tables: “Achievements of Transplantology in Ukraine,” “New Achievements in Neurology,” “Ethical Problems and SSS,” “Modern View on Kobzar, Medical Sciences. Proceedings of the Shevchenko Scientific Society: Modern Development Vectors. In addition, seven master classes were held, which were associated with the topic of managing patients with benign tumors of blood vessels, as well as practical aspects of managing patients with PTSD and two workshops: “Identification of personality using a dental formula during the war. Israeli experience and realities of its implementation in Ukraine” and “Providing emergency aid. The technique of using an automatic external defibrillator” (Fig. 1).

The first plenary session was dedicated to modern technologies in surgery. As part of it, relevant issues of cardiac surgery, surgical ENT care, neurosurgery, the development of robotic surgery and reconstructive surgical service in Ukraine during the war, and modern approaches to surgical treatment of malignant skin neoplasms were considered. Tourniquet syndrome, bone tissue defects and life-threatening injuries of the heart and main vessels. The meeting was opened by Professor Vasyl Lazoryshynets, director of the Mykola Amosov National Institute of Cardiovascular Surgery of the National Academy of Medical Sciences, with a report on “Cardiac surgery in Ukraine in conditions of war.” Professor noted the development of the use of neodymium magnets by specialists of the Mykola Amosov National Institute of Cardiovascular Surgery of the National Academy of Medical Sciences and the Kharkiv Military Hospital as an essential achievement of cardiosurgical care in wartime conditions in the context of heart injuries. At present, thorough work is being done on developing endovascular magnets. However, managing patients with amagnetic foreign bodies remains a significant challenge, as well as the urgent need for amagnetic surgical instruments.

In conclusion, the speaker added that practical and scientific cooperation with leading military medical teams has allowed for creating the best approaches to providing staged specialized care to patients with combat heart trauma. However, diagnosis and treatment of closed heart trauma and improvement of routes for this category of patients remain a problem. The topic of the consequences of combat trauma on the cardiovascular system also needs further scientific research.

The report of Professor Rom Stevens (North Chicago, Illinois, USA) on the topic “Prolonged Tourniquet Syndrome” was equally important. At the beginning of his speech, the speaker noted that with the start of the full-scale war in Ukraine, the prolonged tourniquet syndrome caused many limb amputations that could have been avoided.
Presumably, such prevalence of limb amputations occurred due to the excessive and often irrational use of tourniquets. Obviously, the price of limb amputation for Ukrainian society is too high and will remain a problem for the next generation and even longer. Many Ukrainian military and medical professionals have been trained by various TCCC (Tactical Combat Casualty Care) civilian trainers specializing in the guidelines on medical care of combat injuries. This fact could presumably be the reason for the Ukrainian military’s reassessment of tourniquet use. According to the professor, the short-term solution for the Ukrainian military to prevent the development of prolonged tourniquet syndrome is to develop its own military guidelines for using tourniquets because the instructions based on NATO experience are apparently ineffective on the Ukrainian battlefield. At the end of the report, the speaker noted that preventing and managing prolonged tourniquet syndrome in Ukraine is a critical issue that must be resolved immediately because this problem may lead to significant losses for Ukrainian society.

Noteworthy, other foreign speakers also spoke at the current meeting, and their lectures were no less relevant to the IMF. They included Professor Hudson Barry (USA), Professor Michael Samotowka (USA) and MD Adam Domanasiewicz (Wroclaw, Poland).

The symposium “Relevant Matters of Vascular Surgery” delivered crucial information. Within its framework, Professor Ihor Kobza’s report on the topic “Peculiarities of Diagnosing and Treating Combat Vascular Trauma in the Conditions of a Mobile Field Hospital” stirred great interest among the participants. At the beginning of the speech, the professor noted that every fifth (20%) combat wound involved significant bleeding, and 80–90% of deaths during combat were massive blood loss or shock. Later, the speaker presented the results of combat cardiovascular injury analysis among 322 soldiers in the mobile field hospital from February 25, 2022, to November 25, 2023. So, damage to blood vessels of the limbs was most often observed among soldiers and accounted for 88% of cases. Rare injuries included the neck area (6%), abdomen (5%), and chest (1%). According to the mechanism of combat injury, 19% were bullet injuries, and 81% were mine-explosive injuries. Damage to proximal parts of vessels was observed in 62% of cases, distal – 38%.

The specified results are somewhat different from those available in the registry of vascular injuries of the US troops and indicate the high intensity of hostilities in Ukraine. Later, the speaker presented several clinical cases of combat vascular trauma. The latter featured an interesting case of dissection of the common carotid artery as a result of a blunt neck blow following an explosive injury. Thus, the patient was successfully treated conservatively using unfractionated heparin and transitioning to the new oral anticoagulant edoxaban for three months. Noteworthy, Exodacord is the only domestically manufactured representative of edoxaban on the Ukrainian pharmaceutical market, which is produced by Kyiv Vitamin Factory JSC. The professor summarized that combat injury to limb arteries was the most frequent vascular injury. At the same time, the presence of an experienced vascular surgeon at the II level of medical evacuation allows for improved prognosis for limb preservation and life.

Figure 2. Professor, SSS member. Svitlana Zubchenko against the background of the Christmas banner of the IMF’s partner - Kyiv Vitamin Factory JSC
Professor Svitlana Zubchenko’s report was critical as part of the meeting “Contemporary Diagnostic and Treatment Technologies in Therapeutic Practice” (Fig. 2). The speech concerned modern approaches to treating herpesvirus infections of types I, II, and III. She presented the results of her research on the effectiveness of using domestic Famciclovir and Inosine Pranobex in this context. At the beginning of her speech, the professor noted that herpesviruses are widespread infectious agents encountered by almost every person during their lifetime. However, considering the variety of clinical symptoms and asymptomatic carriage of the infection, the question arises regarding when etiotropic therapy should be used for patients infected with human herpes viruses (HHV).

Today, the group of alpha-herpesviruses, which includes HHV types I and II and HHV type III, is of particular interest. The peculiarity of alpha-herpesviruses is that they have the shortest reproduction cycle (on average, 3 to 4 hours) and manifest tropism to structures of ectodermal origin (skin, mucous membranes, and nervous system). Alpha-herpesviruses use neurons of the sensory nerve nodes of the peripheral nervous system as a reservoir and spread through the transneural pathway. In the process of evolution, herpesviruses have developed various mechanisms which help them avoid human immune protection. Considering this fact, a very serious approach should be taken to the therapy of herpes virus infection. So, etiotropic chemotherapeutic drugs such as Acyclovir, Valacyclovir, and Famciclovir are used today to treat and prevent infections caused by alpha-herpesviruses. The professor noted Famciclovir, among the latter, because it proved its high specificity for herpes-infected cells. Compared to Acyclovir, this drug is more stable, which results in a more prolonged effect. Thus, the period of Famciclovir’s presence in a virus-infected cell is up to 20 hours. In addition, Famciclovir’s significant advantage is its high bioavailability, which is 77% (against 10–20% for Acyclovir and 54% for Valacyclovir). Famciclovir is represented on the Ukrainian pharmaceutical market by the domestic drug Virostat, manufactured by Kyiv Vitamin Factory JSC. This drug has a bioequivalence similar to the original drug. In addition, numerous trials (4 meta-analyses and 89 studies) confirmed the effectiveness and safety of using this manufacturer’s domestic Famciclovir for herpes infection.

At the end of the report, the speaker presented her own research, which concerned the use of domestic Inosine pranobex – Novirin and Famciclovir – Virostat produced by Kyiv Vitamin Factory JSC among patients with recurrent herpes virus infection. Thus, monotherapy with Inosine Pranobex in the treatment of recurrent herpesvirus infection types I and II in the exacerbation stage of a mild degree and the combination of Inosine Pranobex + Famciclovir for patients with herpesvirus infection types I and II in the exacerbation stage of a moderate and severe degree demonstrated good clinical, immunological and virological efficacy. In addition, such therapy was characterized by good tolerability, which is critical in ensuring good patient compliance.

Participants were equally interested in the symposium “Treating Myocardial Infarction and Stroke: Achievements and Prospects”, which impressed attendees with modern and accessible material. Influential speakers included Professor Maciej Lesiak (Poland), who shared his experience conducting complex coronary interventions in patients at very high risk. The speaker noted that in recent years, the number of complex coronary interventions among patients with complex anatomy of heart vessel lesions (stenosis of the left coronary artery, complex bifurcation lesions) has increased. Patients with complex coronary anatomy and complex interventions are known to have very poor prognoses, and calcium levels are an essential and recognized risk factor, particularly among those with triple or left coronary artery disease. This is explained by the fact that calcium, when delivered through a stent, reduces its expansion, which increases the risk of malposition of the stent and procedural complications, which must be considered.

The plenary session “Fundamental Medical Innovations in Ukraine and the World” should also be highlighted as extremely rich in terms of the agenda and essential reports on various medical topics spoken about by both domestic and foreign speakers. The latter included Professor Maciej Kurpisz, Chair of the Department of Biology of Reproduction and Stem Cells of the Institute of Human Genetics of the Polish Academy of Sciences, with a report on “Research of the Transcriptome in the Diagnosis of Male Infertility and Therapy Monitoring.” In his speech, the Professor noted that male infertility’s genetic and molecular research deserves special attention today. This is because genomic causes are responsible for approximately 50% of male infertility cases and may be caused either by the man’s genomic background or result from environmental factors. In addition, there are so-called grounds for idiopathic infertility, which have no explanation. Although, there is a strong suspicion that in most cases of unclear etiology of male infertility, unidentified genomic causes may play a role. The so-called “change in gene position” may cause male infertility. These translocations are of particular interest because they help identify genes and breakpoints that can be responsible for many pathological conditions. That is why, today, there is a great need for additional research on the
Genomic causes of infertility. Instead, systematic analysis using the tools of systemic biology may help examine male infertility from the inside out.

The speech by Andrzej Wincenty Gamian (Poland, Director of the Ludwik Gambian Hirszfeld Institute of Immunology and Experimental Therapy of the Polish) was quite interesting. He presented a report on the topic “Molecular Basis of Cross-Reactivity of Some Bacterial and Viral Antigens with Human Tissues – Clinical Aspects.” In his speech, the speaker discussed the possible mechanisms for developing the so-called “long COVID-19” or post-COVID syndrome and cited examples of the close interaction of bacterial antigens with human tissues. At the beginning of his speech, the speaker reminded the attendees of the importance of molecular mimicry, which is a structural, serological, and functional homology between a microorganism and its host. This type of autoimmunization occurs during infection, where the humoral and cellular responses are directed against pathogen antigens, which are very similar to human tissues. Given the lack of data, a more detailed study of such a mechanism for viral proteins is needed. However, the professor noted that it was this induction of autoantibodies that might be the cause of long-term COVID-19. Therefore, a safe and effective vaccine against COVID-19 was needed to produce and use it to prevent infection spread and complications development.

The symposium on “Modern Challenges of Viral Infections” stirred no less interest among the attendees. As part of it, Sandor Szabo, a foreign guest, Professor at the American University of Health Sciences, spoke with a report on the topic “Updates on LONG-COVID.” The symposium’s domestic participants included Halyna Potomkina, an Associate Professor, who delivered the speech “Viral Infections – a Challenge to Society That Needs Modern Diagnostics and Treatment” (Fig. 3). At the beginning of the speech, the speaker noted that 90% of the world’s population was infected with one or more types of the herpes virus, and 50% of people experienced relapses of this disease every year. Most people are lifelong virus carriers, and almost all herpes viruses can affect the nervous system. That is why the attitude of various doctors to herpesvirus diseases is of great importance, as well as the need to develop clear and uniform diagnostic criteria for this polyosologic problem. Later, the speaker demonstrated the results of her own research, which included a virological examination of patients with neurological disorders. So, among all subjects, HHV-6 was identified in 100% of cases, EBV in 67%, and cytomegalovirus (CMV) in 3%. Isolated HHV-6 was extracted in 31% of patients and in 52% in combination with EBV. Isolated EBV extraction was observed in 14% of cases. Infection with all three viruses (HHV-6, EBV and CMV) was observed in 3% of patients. DNA of viruses was most often identified in scrapings of patients’ mucous membranes and saliva. The Associate Professor also presented the results of another study conducted at the Department of Clinical Immunology and Allergology of the Danylo Halytsky National Medical University. This study studied the effectiveness of domestic Inosine Pranobex—Novirin manufactured by Kyiv Vitamin Factory JSC among patients with rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE) against the background of infection caused by HHV-1. Thus, Inosine Pranobex was applied in such patients in different doses, depending on the severity of the disease course and the frequency of relapses. As a result, the clinical effectiveness (according to the HAQ index) of Inosine Pranobex and primary therapy among experimental patients under the conditions of reactivation of herpes infection type 1 was 72.9%.
On the other hand, the immunological and virological effectiveness was 70.1% and 71%, respectively. It should also be noted that the use of Inosine Pranobex among subjects was characterized by good tolerability of the drug. Accordingly, study results indicate a high clinical, immunological and virological effectiveness of domestic Inosine Pranobex as a long-term etiotropic therapy for reactivated herpesvirus infection.

Professor Svitlana Zubchenko’s report, which discussed the clinical and virological effectiveness of domestic Inosine Pranobex among patients with the post-COVID syndrome, sparked considerable interest among the attendees. Today, long COVID-19 is of significant interest to researchers around the world. It is appropriate to note the role of infections caused by herpes viruses in the pathogenesis of this condition. This is explained by the fact that more than 80% of adults on the planet have “latent” infections caused by EBV or HHV-6, and about 30% are infected with CMV. All of them cause a “silent epidemic” of humanity, and the triggers for their reactivation are diseases and infections that cause immunosuppression in immunocompromised individuals. Later, the speaker presented the results of her own study, which researched the prevalence of reactivated herpesvirus infection among patients with long COVID-19 and the effectiveness of domestic Inosine Pranobex. Thus, among 59 patients who were diagnosed with post-COVID-19 (according to NICE criteria), 47 (79.7%) had reactivation of herpesviruses. Depending on the severity of COVID-19, reactivation of herpes viruses was observed among 25.0% of patients with an asymptomatic disease course, 58.3% of patients with a mild course, 92% of patients with a moderate and 88.9% with a severe disease course. If we look at the structure of herpesvirus identification among patients with long COVID-19, HHV-6 was the most common. It was isolated in 42% of patients. In 26% of cases, EBV was isolated, and co-infection was observed in 32%. Accordingly, patients with long COVID-19 syndrome who were diagnosed with reactivation of herpes viruses were characterized by a severe course of infection caused by SARS-CoV-2 in the anamnesis. Later in the study, Inosine Pranobex was prescribed to experimental patients who had reactivated HHV-6 for three months (regardless of the degree of severity of COVID-19 and the severity of long COVID-19 symptoms). As a result, this treatment demonstrated good clinical efficacy (65.2%) and high antiviral activity (68.1%). These results can be explained by the unique mechanism of action of Inosine Pranobex. Its direct antiviral effect is caused by binding to ribosomes of cells affected by the virus. This slows down the synthesis of viral i-RNA (disruption of transcription and translation) and leads to inhibition of replication of RNA and DNA genomic viruses. It has been proven that in the case of herpes infection, Inosine Pranobex significantly accelerates the formation of specific anti-herpetic antibodies, considerably reducing clinical manifestations and the frequency of relapses. In summary, the speaker noted that herpes virus infections, particularly EBV and HHV-6, can complicate the course of COVID-19 and contribute to the post-COVID syndrome. That is why today, the diagnostic and therapeutic principles of managing patients with COVID-19 need to be corrected, taking into account the role of reactivated herpes infections.

The final speech of the meeting was the report by Oksana Nadizhko, the assistant of the Department of Clinical Immunology and Allergology of the Danylo Halytsky LNMU, on the topic “Prevalence of HHV-6 in patients with post-traumatic stress disorder (PTSD).” At the beginning of the report, the speaker emphasized that the main reasons for immunopathological syndromes in PTSD were likely to be increased peripheral inflammation and neuroinflammation due to the activation of the synthesis of pro-inflammatory cytokines and the simultaneous suppression of anti-inflammatory cytokines. In addition, it was noted that the increased synthesis of cortisol during chronic stress suppresses the cellular link between innate and acquired immunity, which can lead to the activation of latent viral infections, particularly herpes viruses. In the context of PTSD, HHV-6 deserves special attention, given its ability to encode specific dUTPase (anti-herpesviruses deoxyuridine triphosphate nucleotide hydrolase) ligand proteins. The latter can change the structure of the synapse and neuronal communication and induce the synthesis of pro-inflammatory cytokines and chemokines with the formation of painful behavior, which is exacerbated by chronic stress, confirmed by animal studies. It has been proven that the activation of HHV-6 can be clinically manifested by neurological symptoms, cognitive disorders, aggressive behavior, and a tendency to commit suicide, which can presumably increase the manifestations of PTSD. Despite this, this infection often remains undiagnosed among such patients. According to the results of her own research, the speaker demonstrated the prevalence of infection caused by HHV-6 and EBV among patients with PTSD. From February to July 2023, a total of 64 individuals with PTSD (military and civilian) were examined, among which 53 (82.8%) had reactivation of herpes viruses. As for the structure of this infection identification, in 42% of cases, isolated HHV-6 was extracted, and EBV was isolated in 27% of cases. Instead, co-infection was observed in 32% of cases.

Summarizing the above, the speaker noted that immune-dependent inflammation plays a significant role in the context of reactivation of herpes virus infections against the background of PTSD, which probably leads to increased...
manifestations of this condition. In general, the success of PTSD treatment may be affected by viral load and the immune system’s inability to perform antiviral surveillance under conditions of suppression. That is why the introduction of diagnostic methods for identifying activated latent infections and the use of antiviral therapy will probably make it possible to achieve greater effectiveness of basic PTSD therapy and prevent the development of immunopathological syndromes.

Other foreign guests who spoke at the events of the first day also included Professor Serhii Souchelnytskyi (Sweden) and Duan Cheng (Faculty of Medicine and Health Sciences of the Norwegian University of Science and Technology), Adam Domanasiewicz (Wroclaw, Poland), Professor Yuriy Yatskiv (Cleveland, Ohio, USA), Professor Vassyl Lonchyna (Chicago, USA) and Professor Oksana Zayachkivska (Signal Hill, California, USA). At the end of the first day of the IMF, a round table was held, during which strategies for developing the journals “Medical Sciences. Proceedings of the Shevchenko Scientific Society” and “Acta Leopoliencia” were discussed.

The second scientific day of the forum, “Problems of Public Health, Pharmaceutical Industries and Medical Management and Digital Medicine in Wartime Conditions,” was marked by no less relevant activities. In total, six plenary sessions, eight symposia, three master classes, and 7 round tables were held, within which reports related to the problems of public health, pharmaceutical provision, digital medicine, medical chaplaincy, nursing and linguistics, and medical education and its implementation in the world space were presented. Current issues of immunoprophylaxis of infectious diseases and diagnosis and treatment of allergic and orphan diseases were also considered. It is also worth noting that, as part of the event, IMF participants had the opportunity to attend a certified training seminar on Good Clinical Practice (GCP) and learn about the regulatory and legal aspects of conducting clinical research in accordance with GCP requirements. The plenary session on the topic “Directions for Improving Patient Access to Treatment in Ukraine: Challenges and New Opportunities for Pharmaceutical Supplies in Wartime” was extremely important. During this session, the delegation of the State Expert Center of the Ministry of Health (SEC MoH) of Ukraine presented speeches that related to the results of activities of the Ministry of Health of Ukraine in 2023, current issues of the development and possibilities of clinical trials, pharmacovigilance, the development of patients’ access to clinically effective and economically feasible medical technologies in Ukraine. Professor Mykhailo Babenko, Director of the Department of the SEC MoH, opened the meeting with a report on the topic “Activities of the State Expert Center of the Ministry of Health of Ukraine in the Field of Circulation of Medicinal Products in Ukraine: Main Activity Vectors and Functions.” In his speech, the speaker noted that martial law created challenges requiring quick response and effective management in pharmaceutical policy and medicine supply. In addition, an important message was that Ukraine remained a country with great potential for conducting clinical trials. This confirms that, as of 2023, 311 clinical trials of medicinal products have been continued, and 36 new clinical trials have started. Other speeches delivered by the delegation of SEC MoH were equally significant. In particular, Mykhailo Lobas, Deputy Director for Clinical Affairs of SEC MoH, together with Taisia Herasymchuk, the Candidate of Pharmaceutical Sciences, Director of the Department for Examination of Materials for Preclinical and Clinical Trials at SEC MoH of Ukraine, detailed the matter of further steps for the future of the clinical research in Ukraine in their report “Clinical Trials in Ukraine: Current Realities and Future Prospects,” talked about the experience of conducting clinical research in the conditions of war, substantiated Ukraine’s importance for global clinical research.

The highly relevant report by Oksana Souter (Great Britain/Switzerland) on “Artificial Intelligence and Its Role in the Transformation of Healthcare. Challenges and Prospects of Implementation” is critical. This speech was delivered during the plenary meeting “Modern Management of the Diagnostic and Treatment Process Using Digital Medicine.” Thus, the speaker noted that, as of today, artificial intelligence in medicine primarily includes the application and development of medical analytics and diagnostics, telemedicine, medical robots, management of medical facilities, support of clinical decisions, clinical research, health care management, cyber security, and personalized medicine. In medical analytics, artificial intelligence predominantly involves using algorithms to quickly extract relevant information from a large amount of data. Artificial intelligence improves the quality of medical care and accelerates the search for and creation of new drugs. The speaker also mentioned the role of artificial intelligence in supporting clinical decisions. Clinical decision support systems based on artificial intelligence minimize the time it takes to identify high-risk patients and predict the probability of diseases. In the context of clinical trials, artificial intelligence also plays an equally important role because it increases the effectiveness of clinical trials by evaluating these data and predicting results such as treatment effectiveness, device safety, etc. In the context of personalized medicine, artificial intelligence allows faster and more efficient use of data collected through genetic testing, medical records of medical institutions, clinical trials, and research.
As part of the “Communication in Medicine” symposium, David Omut (Signal Hill, California, USA), together with Professor Oksana Zayachkivska, presented an equally important report on the experience and prospects of interprofessional communication in medical education. Interprofessional education is a teaching methodology involving closer cooperation between healthcare specialists. This is teaching teamwork. No profession or individual is responsible for every aspect of healthcare, so close collaboration between nurses, doctors, pharmacists, etc., is needed. This will enable patient-centered technology in the future, which is considered one of the best for achieving the best results. In summary, the possibility of working on the project of implementing interprofessional education at the Danylo Haltsky LNMU was mentioned. This event may become the basis for a grant jointly with the American University of Health Sciences. We should also mention the following foreign speakers who delivered speeches as part of the second day of the IMF: Professor Danylo Hryhorchuk (Chicago, USA), Professor Robert Rejdak (Lublin, Poland), Dr. Vassyl Lonchyna (Chicago, USA), Dr. Halyna Rudenko (Würzburg, Germany), Martin Roeder (Thuringia, Germany), Silvia Böhme (Thuringia, Germany), Olga Gershuni (Eindhoven, Netherlands), Miroslava Škodau (Dubnica nad Wagom, Slovakia), Izabela Nowak (Wrocław, Poland), Karolina Piekarska (Wrocław, Poland), Armen Gasparian (Dudley, Great Britain).

At the end of the second day of the IMF, a round table was held on the topic “Historical Roots of Scientific Achievements of Ukrainians in Europe.” Presentation of the book “Ukraine and Europe: A Historical Perspective” with the participation of Anatolii Budennyi, Candidate of Chemical Sciences, Chair of the Board of the Hryhorii Hudha Charitable Foundation, and Oleksandr Lisniak, Associate Professor of the Department of Pharmacy and Biology of SZ. Gzhytsky Lviv National University of Veterinary Medicine and Biotechnology.

The 12th International Christmas Readings on “Immunology, Allergology and Rheumatology: Modern Realities and Development Prospects” were traditionally held in Lviv on December 15 within the framework of the IMF. The highly relevant and rich scientific event agenda consisted of five plenary sessions: “Rheumatology in Modern Conditions and Development Strategy,” “Allergological Care for Patients Today and Directions of Development,” “Innovative Achievements in Rheumatology,” “Immunological Assistance in Practical Medicine and Strategic Development Vectors,” and “Pediatric Rheumatology.” The symposium “Youth in the Development of Medical Innovations” was also held, and the most interesting reports were awarded. In addition, seven master classes were held, associated with the topics of using innovative signaling immunomodulators, practical aspects of managing patients with drug allergies, angioedema, and anaphylaxis, and participation in the “Horizon – Europe “ program. In addition, five round tables were held on immunology updates, topical issues of medicine in Ukraine during wartime, and publications of the Shevchenko Scientific Society.

Volodymyr Kovalenko, Academician of the National Academy of Medical Sciences of Ukraine and Professor Volodymyr Maksymovych from Canada moderated the first plenary session, “Rheumatology in Modern Conditions and Development Strategy” (Fig. 4) Within its framework, it is worth noting the speech by Professor Roberto Giacomelli (Rome, Italy), which concerned unresolved issues of scleroderma interstitial lung disease. At the beginning of his speech, the professor noted that lung damage caused by systemic scleroderma results from the loss of cell
tolerance and the ability to tolerate adverse conditions. This is a consequence of producing specific autoantibodies that can affect endothelial cells. Damaged endothelial cells can release thrombin. They also undergo apoptosis and can secrete several cytokines and growth factors that activate pulmonary fibrosis, turning cells into myofibroblasts with subsequent fibrosis. In addition, there is ample evidence that immune cell activation plays a vital role in the pathogenesis of lung damage in systemic scleroderma. Thus, a specific population of activated T cells may be potentially relevant in mediating tissue fibrosis. The above processes can identify many genes associated with the risk of disease development. The last aspect is essential because there are genes associated with the recruitment of immune cells, genes associated with excessive activation of the T-cell response and their production of specific antibodies, and genes involved in the development of fibrosis. In addition, many genes are associated with the disorganization and apoptosis of endothelial cells, as well as those related to the enrichment of anti-inflammatory cytokines. Accordingly, knowledge about the genetic background of the disease and molecular pathways involved in the susceptibility and pathophysiology of interstitial lung disease among patients with systemic scleroderma must be enhanced. This is likely to enable the prediction of disease onset and progression and better identification of patients who potentially respond well to basic therapy.

Professor Volodymyr Maksymovych (Edmonton, Canada) gave an important lecture and presented a report on the topic “How Should Clinical Research Be Conducted in Spondyloarthritis? Transformational Role of Visualization.” In his speech, the speaker noted that magnetic resonance imaging (MRI) in spondyloarthritis is now being used more and more often, primarily to assess the intensity of inflammation and modify the disease as part of clinical trials. On the other hand, the use of radiography in spondyloarthritis has its drawbacks in the context of timely diagnosis of the disease. In addition, the interpretation of the picture may differ depending on the patient’s age. Accordingly, the specificity and reliability of using radiography in spondyloarthritis is low. With this in mind, the professor emphasized the urgent need to standardize MRI in the context of managing such patients, as MRI evidence of inflammation is the best indirect measure of disease activity.

The plenary session “Allergological Care for Patients Today and Development Vectors” is also worth mentioning. The report by Professor Maria Torres (Malaga, Spain) should be noted within its framework. The professor discussed precision medicine in detail in the context of managing patients with drug hypersensitivity. Thus, at the beginning of his speech, the speaker emphasized that some patients, despite absolutely identical clinical characteristics of the drug allergy phenotype, may have different endotypes of the latter, which is directly based on variations in genetic pharmacology, physiology, and biological or immunological pathways. This has significant consequences for facilitating the course of such a condition, which determines the individual treatment or even predicts the disease prognosis. Therefore, if a similar drug allergy phenotype has a different endotype and outcomes, it is critical to identify biomarkers to help us diagnose, treat, and forecast drug allergy. It is crucial to define endophenotypes precisely because, in many cases, the treatment will be completely different. Accordingly, if a patient develops endotype dependence, the treatment and management approach will be completely different and will vary depending on the regular administration of the drug. Thus, applying an individual approach to a patient with drug allergy in clinical practice requires the use of valid biomarkers, which are absolutely necessary to determine different phenotypes of drug allergy and prescribe appropriate drugs.

Other critical foreign speakers who took part in the activities of the third day of the IMF include Daniel Aletaha (Vienna, Austria), EULAR President, Professor Gerd Burmester (Berlin, Germany), Chair of the Department and Clinic of Rheumatology and Clinical Immunology of the Humboldt University of Berlin, the Charité clinic, Professor Mariusz Korkosz (Krakow, Poland), Chair for Rheumatology and Immunology at the Jagiellonian University Medical College and Chair at the Department of Rheumatology and Immunology at the University Hospital in Krakow, Professor Piotr Wieland (Wroclaw, Poland), Agata Sebastian (Wrocław, Poland), Professor Marcin Moniuszko (Białystok, Poland), Professor Patrizia Bonadonna (Verona, Italy), Professor Knut Brokow (Munich, Germany), Professor Lene Heise Garvey (Copenhagen, Denmark).

At the end of the event, the provisions of the IMF resolution were adopted, which concerned issues of military medicine (new treatment and rehabilitation means, implementation in accordance with NATO standards); introducing scientific research results into the practical medicine of Ukraine, Europe, and the world; developing scientific projects (grants) of Ukrainian scientists and doctors with world professional communities and creating international consortia; cooperating with international and Ukrainian partners regarding the organization of medical research in the field of clinical sciences; advocating changes in the undergraduate and postgraduate education of doctors with its implementation in the international system of medical education; holding annual international and
professional conferences jointly with WFUMA, UMA and UMA in Lviv under the auspices of the SSS; developing the partnership between the Medical Commission of the Shevchenko Scientific Society with professional scientific societies of Ukraine and the world for arranging scientific and practical events; active support of the printed journal of the Medical Commission of the Schechencko Scientific Society “Proceedings of the Shevchenko Scientific Society. Medical sciences”; further improving the journal in terms of compliance with the requirements of the scientometric databases PUBMED, MEDLINE and Web of Science; supporting young scientists: scholarship support, “Reagents for Youth Science” grant, preferential printing of the best articles by young scientists in the journal “Proceedings of the Shevchenko Scientific Society. Medical Sciences,” holding youth professional winter and summer schools; further developing Ukrainian terminology in medicine and expanding the study of professional English; further encouraging leading scientists in the fields of medicine, biology, IT technologies, and foreign scientists to become members of the medical commission; promoting historical figures of the Medical Commission of the SSS and writing scientific works devoted to the history of the medical commission; promoting public health problems in society.

References


