

UM

magazyn

UNIWERSYTETU MEDYCZNEGO W ŁODZI



Interview

with Dr hab., Prof. UM
Waldemar Machała

– Vice-Rector
for Military
Health
Services

15 years
**Open
Days
UMED**

**We're
running
to help**
– the anniversary
edition of the
**UMED Charity
Run**

2026 **Nº 2**

ISSN 2543-8900

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EDITOR-IN-CHIEF
Anna Pielesiek-Kielma
DEPUTY EDITOR-IN-CHIEF
Anna Rykiert
LAYOUT AND GRAPHIC DESIGN
Klaudia Zakrzewska
PROOFREADING
Monika Osińska

EDITORIAL ADDRESS:

Promotion Office of the Medical University of Łódź
90-647 Łódź, pl. gen. J. Hallera 1B
Tel. 42 272 50 94-95, ummagazyn@umed.lodz.pl



Dear Readers,
we are pleased to present the latest issue of the Medical University of Łódź magazine. This issue showcases just how diverse, yet cohesive, our community is – made up of people united by a sense of responsibility, curiosity and a willingness to take on new challenges.

In it, you will find stories about science, which does not take place solely in laboratories, but begins with questions, courage and collaboration. These are also stories of young people taking their first steps in the world of research, learning scientific thinking and discovering that development is a process that requires commitment, openness and confidence in one's own abilities.

This issue also highlights the importance of encounters – those between science and practice, between the university and prospective students, and between experience and a fresh perspective. Events such as Open Days and participation in education fairs demonstrate that building relationships and fostering dialogue are among the most crucial elements of a university's development today.

There will also be no shortage of topics related to the future of medicine – the development of research, internationalisation and the challenges facing the modern healthcare system. We present the Medical University of Łódź as a place that not only responds to change but actively shapes it – with a view to safety, the quality of treatment and a tangible impact on patients' lives.

I believe that reading this issue will be for you not only a source of information, but also an inspiration – to take action, to explore and to view science as a realm of possibilities. I hope you find this issue inspiring,

Anna Pieliesiek-Kielma
Editor-in-Chief



Interview

with Prof. Waldemar Machała

- Vice-Rector for Military Healthcare

In

In the face of rapid changes in the national security system, the role of the military health service is taking on particular

significance. We discuss the challenges, priorities and directions for the development of training for future medical staff with Dr Waldemar Machała, Professor at the university.

In recent months, you have spoken, Professor, about the need for widespread training in battlefield medicine in the context of the experiences of the war in Ukraine. In your opinion, how should these experiences translate into changes to the training system for military medical personnel in Poland?

The war in Ukraine has highlighted that modern armed conflicts are protracted in nature and involve not only the armed forces but also entire societies. In this context, tactical medicine ceases to be the exclusive domain of the military and becomes an element in building a nation's resilience. Widespread training should not only cover doctors, nurses and paramedics, but should also be provided at undergraduate level (across all medical degree programmes). The ability to provide first aid in conditions of limited access to equipment and support is of key importance.

Medical professionals should be prepared to make independent decisions in ambiguous situations. It is also essential to develop competencies in tactical medicine and the management of mass casualty incidents. Curricula should incorporate inter-agency cooperation. Training in medical logistics and the organisation of evacuations is also a key element. The aspects of mental resilience and working under pressure must not be overlooked. Consequently, we should strive for a more flexible and realistic training model.

In one of your interviews, you pointed out that the 'golden hour' no longer exists in the context of the modern battlefield. What consequences for tactical medicine and the organisation of military healthcare result from this state of affairs?

The concept of the 'golden hour' has for many years formed the foundation of

Experiences from Ukraine indicate that a thorough review of the training model for military medics is necessary. The current system, largely based on the realities of hospital medicine, does not fully meet the challenges of the modern battlefield.

Experiences in Ukraine show that a rapid response from bystanders often determines whether a casualty survives. It is also essential to develop habits of acting under time pressure and stress (often caused by a threat to one's own life). This type of training should be systematic and repeated, rather than a one-off event. It is also important to standardise training standards to ensure consistency in the actions of different services. Equally important is raising public awareness regarding how to respond to crisis situations. In my view, this is an investment in security that yields long-term benefits.

Experiences from Ukraine highlight the need for a thorough review of the training model for military medics. The current system, largely based on the realities of hospital medicine, does not fully meet the challenges of the modern battlefield. The proportion of practical sessions conducted in conditions simulating real combat operations should be increased. It is also crucial to introduce training in an environment characterised by limited evacuation options and resource shortages.

planning for the care of casualties. In the context of modern conflicts, however, it is increasingly the case that rapid evacuation is not possible. This is due to the risks associated with the use of modern weapons and a lack of control over the operational area. Consequently, the focus of life-saving efforts shifts to the period immediately following injury. This necessitates the development of the concept of *'prolonged field care'*, i.e. long-term care for the wounded. In practice, this requires a significantly higher level of training for both medical and non-medical staff. It is also essential to provide appropriate equipment enabling the patient to be stabilised for a longer period (before the casualty reaches hospital). The role of the medical evacuation system is also changing; it must be more flexible.

And, referring specifically to the question regarding the 'golden hour'.

The 'golden hour' has not ceased to exist, because there is no need to prove to anyone that providing assistance within this timeframe will result in the greatest chances of

. I might perhaps say that Russia 'killed the golden hour'.

In light of the recent violations of Polish airspace by hostile drones, how do you assess the readiness of the military medical service to respond to hybrid incidents or sudden mass incidents?

Any assessment of the military medical service's readiness must take into account the rapidly changing security environment. Hybrid incidents, including the use of drones, are becoming increasingly likely. Poland is taking steps to enhance its resilience in this regard.

It is crucial to target financial resources appropriately. The first priority should be to invest in modern teaching and simulation infrastructure. This is what enables realistic preparation for work in battlefield conditions. Equally important are investments in the development of academic and teaching staff. Without suitably trained lecturers, it is difficult to achieve high-quality education. It is also essential to support scientific research in the field of military medicine. Technological facilities, including simulation systems and digital solutions, must be developed. It is also important to establish the infrastructure for international cooperation. Logistical and organisational support must not be overlooked. The right balance of emphasis

The establishment of the Military Medical Academy is not only a return to tradition, but above all an investment in national security in its most fundamental dimension – the protection of life and health in crisis situations.

We are seeing progress in the area of crisis response planning and exercises. At the same time, threats of this kind require further refinement of procedures and inter-institutional cooperation. It is crucial to ensure the rapid flow of information and the efficient mobilisation of medical resources. An important element in this regard is the integration of the military system with the civilian one. It is also essential to develop the capacity to respond to mass casualty incidents. The ongoing training of personnel in new threat scenarios remains vital. It could be said that we are on the right track, but this process requires further consistency.

This means we still have a long way to go before we can say with a clear conscience that the health service (including the military health service) is prepared to respond to such incidents (including the management of mass casualties).

The government has adopted a draft bill on the reactivation of the Military Medical Academy, with investment set to reach around 400 mln zł. In your opinion, which key areas require the greatest investment in its re-establishment?

The establishment (not the reactivation) of the Military Medical Academy is a project of great strategic

investment strategies will be crucial to the project's success.

The project enjoys broad political support, and Łódź is set to become a centre for battlefield medicine. How do you, Professor, view the role of the new Military Medical Academy within the national security and defence system?

The establishment of the Military Medical Academy is not only a return to tradition, but above all an investment in the state's security in its most fundamental aspect – the protection of life and health in crisis situations.

I see this institution as a key centre integrating education, scientific research and clinical practice in the field of combat medicine. Łódź has all the prerequisites to become a centre of excellence – a place where doctors and medical staff are trained to operate in extreme conditions: under time pressure, in hazardous environments and with limited resources.

However, the role of the proposed WAM should go beyond the traditional training of personnel for the armed forces. It should also serve as a platform for building interoperability between the civilian and military systems – particularly in the context of

mass incidents, disasters or asymmetric conflicts. In this sense, we are talking about an institution that genuinely strengthens the state's resilience.

The research and development aspect is also significant. Combat medicine very often leads the way in solutions used within the civilian system – this applies, for example, to the organisation of pre-hospital care, the treatment of injuries or crisis management. The WAM can be a place where these innovations are developed and subsequently integrated into the entire healthcare system.

To sum up, then – I see a reactivated WAM as a pillar of the national health security system: a modern, interdisciplinary institution that combines academic potential with the real needs of national defence and prepares us for challenges which – unfortunately – are no longer merely theoretical.

Legislative work is still ongoing, and the original timeframe is subject to change.

Do delays in the work on the bill affect the planning of training for military doctors and medical specialists?

The legislative process, particularly in the case of such complex proposals, often requires time and consultation. Delays may affect the pace at which new measures are implemented. In the field of education, this means having to operate under conditions of uncertainty. At the same time, the education system cannot be brought to a standstill. It is therefore crucial to maintain the continuity of training based on existing structures, an area in which the Medical University of Łódź has undeniable achievements and experience. Universities and institutions – both civilian and military – must demonstrate flexibility.



In practice, this means adapting programmes to current capabilities. Good communication between decision-makers and the academic community is also important. This helps to minimise the negative effects of delays. We must also prepare for various scenarios as the situation develops. Ultimately, the most important thing is to maintain high-quality education.

According to the proposal, WAM is to serve as an independent training centre dedicated to military healthcare. Do you believe that such a centralised approach is better than the current model of cooperation between several universities and institutions?

I am a moderate advocate of centralisation (perhaps with the exception of standardised educational programmes). Cooperation is an element of development – it is what 'drives us forward'. This is because it prevents our perspective from narrowing and, over time, from leading us to believe, for example, that 'we are the best and others know nothing'.

The Military Medical Academy should play a much broader role than merely an educational one. In the context of national security, it could become an important centre for integrating the activities of various institutions (hence cooperation, and certainly not centralisation). Its remit should include not only education, but also conducting research and implementing innovations.

Łódź, as an academic centre, has the appropriate infrastructure for this. The Academy could become a venue for cooperation between the military and civilian communities. Building international relations is also crucial. The Military Medical Academy could serve as a centre of excellence in the field of battlefield medicine. Its activities should support the state's crisis response system. It is also important to establish training standards. In the long term, this could strengthen Poland's position within NATO structures. This is a project with significant potential for development.



Data show that the Polish army is short of doctors – as many as 40–60 per cent of posts remain unfilled. What solutions does the Professor consider to be the most effective in reversing this trend?

The shortage of doctors in the armed forces is a complex, multi-factorial problem. It is influenced by both financial and organisational issues. It is crucial to create attractive conditions of service (particularly after graduation and specialisation). This encompasses not only remuneration but also opportunities for professional development. Job security and a clear career path are important. It is also essential to build a positive image of military service. Scholarship programmes can encourage young people to choose this path. Appropriate working conditions must also be ensured. Cooperation with the civilian sector can be an additional advantage. The aspect of prestige is also significant. A comprehensive approach increases the chances of improving the situation.

Currently, future military doctors are trained at the Medical University of Łódź, whilst at the same time cadets at the Land Forces Academy in Wrocław, 'placed under the care' the Military Medical Training Centre in Łódź. How do you assess the effectiveness of this model and the relations between civilian and military universities?

The training model implemented jointly by the Medical University of Łódź and the Military Medical Training Centre is an example of effective cooperation. It combines the academic potential of a civilian university with the experience of the military community. Students have access to high-quality teaching and clinical practice. At the same time, they acquire skills specific to military medicine. This type of model fosters the all-round development of future doctors. However, it requires good coordination and a clear division of roles. It is also essential to continuously improve the curricula. Cooperation should be based on partnership. It is important to take the needs of both sides into account. The experience to date can be assessed positively. It provides a solid foundation for further development.

In some NATO countries, military doctors are trained at leading civilian universities, which gives them access to the best academic staff. Should Poland follow a similar path, or should the Military Medical Academy (WAM) replace such arrangements?

In many NATO countries, the training of military doctors takes place in close cooperation with civilian universities. This ensures access to the highest-quality teaching staff and clinical facilities. Poland should draw on these experiences. At the same time, it is worth developing its own specialised centres, such as WAM. The aim is not to replace one model with another, but to ensure they complement one another. Cooperation with civilian universities should remain an important element of the system. WAM can serve as a centre of military expertise. Such a model allows for the combination of broad medical knowledge with specialised military training. It is important to maintain a balance between these areas. The flexibility of the system is a major advantage. This makes it possible to adapt to changing needs.

Łódź is set to become a centre for battlefield medicine, including the establishment of the Military Medical Academy

. What new skills or technologies do you consider key to the training of future military medics?

Centralising education within a single centre has its undoubted advantages. It facilitates the standardisation of curricula and the building of a strong institutional brand. It also allows for the concentration of resources and staff. On the other hand, a decentralised model offers access to a wide spectrum of experience and expertise. Civilian universities possess considerable scientific and clinical potential. Therefore, a complete move away from collaboration might not be optimal. It seems that the best solution is a hybrid model. It combines the advantages of centralisation and inter-institutional cooperation. Ensuring consistency in training standards is key. At the same time, it is worth preserving the diversity of educational environments. Such a model fosters the development of skills and innovation.

Curricula are increasingly incorporating combat simulations, night-time training and operations under conditions of limited evacuation. Could you indicate which elements of tactical training are most under-appreciated today, and should be made a priority?

Tactical training has undergone significant development in recent years. Realistic scenarios and simulations are being used more and more frequently. Despite this, certain elements are still underestimated. One of these is mental preparation for operating under stressful conditions. The ability to make decisions under pressure is of crucial

importance. Equally important is the ability to work as part of a team. Communication in combat conditions can be difficult and requires training. Managing resources in situations of scarcity is also crucial. Leadership skills must be developed. It is also worth paying attention to the aspects of fatigue and sustained operations. A comprehensive approach to training yields the best results.

You have been appointed to the Scientific Councils of the most important military medical institutes. In your opinion, what measures are most urgent today for the modernisation of military medicine in Poland?

First and foremost, conviction – the principle that, whilst medicine is not the most important factor in achieving combat objectives, it is indispensable in dealing with their consequences.

The military health service (the entire health service) – it's a sort of 'the Woody Harrelson of the modern world'... seemingly a supporting character, but without him the script of life would not exist (it would never have been written in the first place).

In 10 years' time, the Military Medical Academy should be a modern and recognised centre in Europe. Its activities should encompass both education and scientific research.

The modernisation of military medicine requires action on many levels. One of the most important areas is the development of infrastructure. Modern facilities enable effective training and treatment. Investments in scientific research are equally important. They allow for the implementation of innovative solutions. The use of new technologies is also crucial. The integration of military and civilian systems enhances operational efficiency. The training and development of staff are also important. Care must be taken to ensure there are sufficient numbers of trained personnel. Improving resource management is also vital. All these measures require a coherent strategy. Only then is it possible to bring about a real improvement in the system.

From the perspective of many years of clinical and scientific work – what has changed most in military medicine over the last decade?

Over the past decade, military medicine has undergone a fundamental transformation. One of the most significant trends is the development of tactical medicine. There is an increasing emphasis

It focuses on operations in pre-hospital settings.

All this can take place following the adoption of standards, of which I shall mention the two most important: *Tactical Combat Casualty Care* (TCCC) and *the Joint Trauma System* (JTS).

The approach to training has also changed. It is now more practical and realistic. Advanced simulation systems are particularly important. They allow for the realistic recreation of battlefield situations.

Modern technologies supporting medical operations have been introduced. Telemedicine and communication systems have developed. They enable real-time consultations and support. Clinical decision support systems enhance the safety of operations. Artificial intelligence is also becoming increasingly important. It can support data analysis and diagnostic processes. Medical logistics must not be overlooked. Modern technologies should go hand in hand with practical training.

Furthermore..., the importance of international cooperation has grown. Experience gained from overseas missions has had a major impact on the development of the system. The approach to or-

on the organisation of medical care. It is more flexible and adapted to the realities of modern conflicts. This is an ongoing process.

What vision for the Military Medical Academy would you, Professor, like to see in 10 years' time?

In 10 years' time, the Military Medical Academy should be a modern and recognised centre in Europe. Its activities should encompass both education and scientific research. Maintaining a high standard of teaching is key. The Academy should collaborate with the best centres both at home and abroad. It is also important to develop innovative technologies. The Military Medical Academy could become a leader in the field of battlefield medicine. Its graduates should be thoroughly prepared for service. It is also vital to build the institution's prestige. The Academy should play an active role in the national security system. Its role may extend beyond the country's borders. This is an ambitious yet realistic vision for its development.

The named after Prof. M. Stefanowski

– an interview with this year's winners



N The Prof. M. Stefanowski Award is a distinction granted for work that genuinely brings something new to clinical and procedural sciences. In this year's edition the award was presented to Dr Karol Wiśniewski, MD, PhD, and Dr Łukasz Łaziński, MD, PhD. We spoke to the winners about their work on the award-winning projects, the research behind their success, and what this journey



Dr Karol Wiśniewski, MD, PhD, is a neurosurgeon and works at the Department of Neurosurgery and Oncology of the Nervous System at the Medical University of Łódź. He graduated with honours from medical school in 2011, obtained his PhD in 2018, and was awarded a postdoctoral degree in medical sciences in 2025. In 2020, he was awarded the European title of Fellow of the European Board of Neurological Surgery (FEBNS).

He gained his professional and academic experience in Poland and at centres abroad, including in Australia, the USA and Japan. His research interests focus on the pathogenesis and the diagnosis of cerebral vascular complications, particularly delayed cerebral ischaemia following subarachnoid haemorrhage.

He is the author of over 50 scientific publications and a co-author of a patent application concerning the diagnosis of the risk of delayed cerebral ischaemia. He has participated in numerous research projects funded by the National Science Centre (NCN), the National Centre for Research and Development (NCBiR) and NAWA.

In his research, he combines a clinical approach with modern methods of biomarker analysis and disease process modelling, developing tools to support early diagnosis and personalised treatment for neurosurgical patients. He actively participates in the international scientific community, presenting research findings at national and international conferences.

“This award also has a very personal dimension – I see it as a commitment to continue this tradition: combining clinical, scientific and teaching, and building a team based on collaboration and high ethical standards.”

Dr , Assoc. Prof. , , Dr , Karol Wiśniewski,
Department of Neurosurgery and Oncology of the
Nervous System

What does receiving the Prof. M. Stefanowski Award mean to you?

Receiving the Prof. M. Stefanowski Award is a tremendous honour for me and one of the most significant moments in my scientific and clinical career to date. It holds particular value because it is awarded by the community with which I have been associated since the start of my professional career, and relates to the field at the heart of my work – neurosurgery.

This honour also has a symbolic dimension. Professor Marian Stefanowski was not only an outstanding surgeon, but also a teacher and mentor to many generations of doctors. His approach to medicine – combining the highest level of knowledge, responsibility for the patient and respect for colleagues – remains relevant today and serves as an important benchmark.

This award also has a very personal dimension – I see it as a commitment to continuing this tradition: combining clinical, research and teaching activities, and building a team based on collaboration and high ethical standards.

My habilitation thesis addresses the issue of delayed cerebral ischaemia following subarachnoid haemorrhage – one of the most serious complications, which continues to pose a significant diagnostic and therapeutic challenge. In my research, I analysed the role of oxidative stress and the failure of antioxidant mechanisms, focusing on the search for biomarkers that would enable earlier detection of this complication and improve treatment outcomes.

I regard the Prof. M. Stefanowski Award as recognition not only of my individual efforts, but also of the work of the entire team with whom I have had the pleasure of collaborating over the years – both at home and abroad. Modern medicine is a team effort, and scientific progress is impossible without cooperation, the exchange of experiences and mutual support.

For me, this is both a motivation and a commitment to continue my scientific work, to develop new areas of research and to implement their findings into clinical practice. I hope that in the future this will translate into a tangible improvement in patient care, particularly for those in the most critical condition.

It is also a moment for reflection and gratitude – towards my teachers, colleagues and patients, who remain the most important point of reference for our work.

What significance does the awarded habilitation thesis have for the development of clinical practice and further research in your speciality?

My habilitation thesis concerns one of the most serious complications of subarachnoid haemorrhage, namely delayed cerebral ischaemia. From a clinical practice perspective, its significance lies primarily in attempting to identify the mechanisms responsible for the development of this complication, as well as in the search for reliable biomarkers enabling its earlier diagnosis.

The results of the studies indicate that an imbalance between oxidative stress and antioxidant mechanisms may play a key role in the pathogenesis of this process. This opens up the possibility of using specific biochemical markers not only as prognostic tools, but also, in the future, as aids in therapeutic decision-making.

From a clinical practice perspective, the most significant potential outcome of this research is the ability to identify patients at high risk of complications at an earlier stage, which would allow for a more personalised approach to treatment and more intensive monitoring.

At the same time, the results obtained provide a starting point for further research – including both multicentre clinical trials and work on the implementation of diagnostic tests, as well as the search for new therapeutic strategies targeting oxidative stress. In the long term, this may contribute to improving patient prognosis and increasing the effectiveness of treatment in neurosurgery.

How did the Medical University of Łódź support you on your path to achieving these scientific breakthroughs?

The Medical University of Łódź played a key role

in my scientific development, creating the conditions for consistently combining clinical work with research activities. Already during my undergraduate studies, and subsequently during my specialist training and work at the Department of Neurosurgery and Oncology of the Nervous System, I had the opportunity to develop my scientific interests in direct connection with clinical practice.

The mentorship I received was of particular importance to me, especially that provided by Professor Dariusz J. Jaskólski, who supervised my doctoral thesis and played a significant role in guiding my scientific work. Working in such an environment allowed me not only to develop my research skills, but also to learn critical thinking and how to plan research projects of clinical significance.

The university also provided me with access to research facilities and the opportunity to carry out research projects based on clinical data. Support in developing international collaboration was also crucial – the experience gained at overseas centres, including in Australia and the United States, enabled me to broaden my research perspective and become involved in international projects.

Another important aspect of this support was the opportunity to publish research findings in renowned scientific journals and to develop my own research projects, which ultimately contributed to my habilitation. The university fostered an environment conducive to teamwork, which was crucial for carrying out interdisciplinary research.

Equally important was the opportunity to combine research with teaching, which allows me to pass on knowledge to the next generation of doctors whilst simultaneously developing my own academic skills.

What areas of research do you plan to pursue in the coming years following the award of this prestigious honour?

In the coming years, I plan to continue and develop my existing lines of research, focusing primarily on an in-depth analysis of the mechanisms responsible for delayed cerebral ischaemia following subarachnoid haemorrhage. A natural continuation of this work is the implementation of a project under an OPUS grant, funded by the National Science Centre, of which I am the principal investigator. This project aims to further identify and validate biomarkers associated with oxidative stress and their potential application in clinical practice.

In parallel, I plan to develop research using computational fluid dynamics (CFD) methods, which allow for a detailed analysis of blood flow in cerebral vessels, particularly in the context of intracranial aneurysms. This approach facilitates a better understanding of the mechanisms underlying their formation, rupture and recurrence following treatment, and may in future support the process of treatment planning and the personalisation of patient care.

Another key area of focus will be the integration of clinical, biochemical and imaging data, which will enable the creation of more precise predictive models for the risk of complications. This approach is in line with the development of personalised medicine, in which therapeutic decisions are based on multidimensional data analysis.

My aim is for the research I conduct not to be purely theoretical, but to translate into concrete solutions that can be applied in everyday clinical practice, thereby improving the safety and treatment outcomes of neurosurgical patients.

If you were to advise younger researchers today on what 'makes the difference' most in scientific work, what would it be?

If I had to name one thing that really 'makes a difference' in scientific work, it would be consistency in one's approach and the ability to combine intellectual curiosity with discipline. Ideas do come up

frequently, but it is systematic work and determination that determine whether they will be seen through to the end.

The second key element is choosing the right environment and mentors. Working with experienced people who can take a critical look at a project whilst supporting its development is of immense importance – it helps to avoid many mistakes and accelerates scientific progress.

It is also very important to have the courage to tackle ambitious topics and to be open to collaboration. Modern science is team-based and interdisciplinary – often the best results emerge at the intersection of different fields.

And finally – it is worth remembering, particularly in the clinical sciences, that behind every project there are patients. It is their problems that should be the starting point for research and the ultimate criterion of its value.



Dr Łukasz Łaziński, MD

– doctor, plastic surgery trainee, assistant at the Department of Plastic, Reconstructive and Aesthetic Surgery headed by Prof. Anna Kasielska-Trojan, MD, PhD.

In February 2025, he defended his doctoral thesis entitled 'Clinical predictors for the diagnosis and differentiation of keratinocyte carcinomas', supervised by Prof. Bogusław Antoszewski, MD, PhD. Winner of this year's Prof. M. Stefanowski Award for the best doctoral thesis in the field of surgical clinical sciences.

, PhD , MD Łukasz Łaziński, Department of Plastic, Reconstructive and Aesthetic Surgery

What was your first thought when you found out you'd been awarded the prize?

My first reaction was one of great surprise, followed immediately by a sense of immense honour and satisfaction. It was a moment that reinforced my conviction that it is worth consistently pursuing the path I have chosen. This is a particularly valuable award for me, as it relates to my research work in the field of plastic surgery, which is my day-to-day profession.

“I regard this award, above all, as motivation and an incentive for further academic development. It reinforces my conviction that it is worthwhile to continue my academic work.”

Which aspect of your doctoral thesis was the greatest challenge for you?

The greatest challenge was collecting clinical data and analysing it from multiple angles. This process required a great deal of meticulousness, patience and critical evaluation of the results. Another key aspect was balancing research work with day-to-day clinical and teaching duties.

To what extent can the findings of your doctoral thesis be applied to clinical practice or further research projects?

I believe that the findings have real potential for application in clinical practice, particularly in terms of improving diagnostic accuracy and optimising treatment decisions. They can support doctors in their day-to-day work with patients with keratinocyte cancers. At the same time, they provide a good starting point for further research, particularly regarding the validation of the proposed predictors in larger populations. In the future, it may also be possible to combine them with modern diagnostic tools, such as dermospectrophotometry.

What role did the environment at the Medical University of Łódź – your supervisors, team and infrastructure – play in your academic development?

Every PhD student knows full well that a close-knit team is the key to success. I have the pleasure of working every day in an environment that fosters the exchange of knowledge and supports

the development of researchers. At this point, I would like to extend my special thanks to my supervisor, Prof. Bogusław Antoszewski, MD, PhD, for his expert support, experience and inspiration for my continued development. Nor could my research have been carried out without the cooperation of the doctors, nurses and hospital laboratory staff, to whom I am immensely grateful.

Do your PhD and this award change anything in your plans for the coming years?

I regard this award, above all, as motivation and encouragement for further academic development. It reinforces my conviction that it is worthwhile to continue my academic activities. In the coming years, I plan to launch new research projects, as well as to apply existing findings to everyday clinical practice.

I also intend to continue my teaching work with students, which gives me immense satisfaction and is my favourite aspect of working at the Medical University of Łódź.





Anna Pielesiek-Kielma
Promotion Office KUMPEL
Project Coordinator

YOUNG PEOPLE IN SCIENCE

Reports from participants
in the eighth edition of the
 programme



O We present our readers with a unique collection of texts, the result of the work of young people who, with courage, curiosity and immense dedication

have ventured into the world of science. The five articles, prepared by teams from the eighth edition of the KUMPEL programme at the Medical University of Łódź, are not only a record of research and analysis, but above all a testament to scientific maturation,

their first real laboratory experiences and encounters with science 'from the inside'.

The authors of these texts had the opportunity to work in research teams, learn about the methods used in modern laboratories, analyse data, draw conclusions and compare theory with practice. The topics covered in the articles span a wide range of biomedical sciences — from molecular and toxicological research, through diabetology and patient education, to the search for new mechanisms and potential therapeutic approaches. The common thread, however, remains rigour, attentiveness and a genuine passion for discovery.

The published articles demonstrate that science is not an abstract concept from textbooks, but a process requiring patience, collaboration and critical thinking. It is also proof of the vital role played by contact with a mentor, teamwork and the opportunity to ask questions — including those for which answers are only just beginning to emerge — in shaping future researchers and doctors.

We hope that reading these articles will inspire our readers and confirm that investing in young talent is truly worthwhile. It is in projects such as these that the future of science is born — a future that is responsible, informed and driven by curiosity about the world.



Participants at the closing ceremony for the 8th edition of KUMPEL



THE GREEN TEAM

Mentor: Dr Monika Żurawska-Kliś, MD

Supervisor: Aleksandra Oto, Adrian

Ołubiec

Title: "Knowledge is medicine – the impact of education on metabolic control in diabetes." Students: Aleksandra Fuks – B. Prus High School No. XXI in Łódź,

Roksana Ciesielska – K.K. Baczyński Secondary School No. XXVI in Łódź

Over the past year, as the Green Team, we had the opportunity to work with Dr Monika Żurawska-Kliś, MD, and sixth-year medical students Aleksandra Oto and Adrian Ołubiec. During the project, we delved into the field of medicine known as diabetology. What set our project apart from others was direct contact with patients, which required us to have the appropriate theoretical preparation. This was an incredibly exciting prospect for us.

We began the training programme with a meeting with Dr Katarzyna Łokieć, MD, who explained to us the importance of diet in the treatment of various types of diabetes. We received a wealth of valuable scientific materials expanding on this topic. Next, Dr Monika Żurawska-Kliś, MD, shared her knowledge with us – we attended lectures on the types of insulin therapy and pharmacotherapy available in Poland. We also attended a training session on continuous glucose monitoring systems for patients with type 1 diabetes, gestational diabetes and type 2 diabetes.

The knowledge we gained enabled us to develop educational materials for patients in the form of posters

offering 'knowledge in a nutshell'. These covered four key areas: diet, physical activity, insulin therapy and self-monitoring. These materials formed the basis for sharing knowledge with patients.

We began our work at the Diabetes Clinic of the Central Clinical Hospital of the Medical University of Łódź by observing Dr Monika Żurawska-Kliś, MD, in her work with patients. We quickly realised that the medical profession requires not only medical knowledge but also highly developed soft skills, which proved extremely useful in our conversations with patients. Nurse Jolanta Jurek was an invaluable help to us, accompanying us throughout our time at the clinic.

Our task was to see patients waiting for an appointment with a diabetologist – we measured their body weight, height and blood pressure, including using the Korotkov method with a sphygmomanometer. However, the key parameter was glycated haemoglobin (HbA1c), the level of which reflects the average glucose concentration over the past three months. We entered the results into a database we had created.



Aleksandra Fuks taking a blood glucose reading

Carrying out the medical procedure of pricking a fingertip and operating the HbA1c analyser allowed us to feel like future doctors and provided us with valuable practical experience. The patients were happy to cooperate with us, placing a great deal of trust in us.

In addition, we had the opportunity to take part in events beyond the scope of our project, which allowed us to broaden our experience and knowledge. We represented the Student Diabetes Research Society at the 6th Interdisciplinary Scientific and Training Conference for Students of the Medical University of Łódź, where we took part in workshops on cannulation and a lecture on calculating calorie requirements for different patient groups. We also took part in Diabetes Day organised at the Home Army High School No. 33, which provided an opportunity for active discussion with our peers.

As a result of our research, we observed significant gaps in patients' knowledge. Even those who have been living with the condition for many years or who achieve good HbA1c results make basic mistakes in their day-to-day management of the condition. This highlights the need to step up educational initiatives, which could lead to improved treatment outcomes and quality of life for patients – without the need to modify their therapy.

It should not be forgotten that, alongside modern methods of treating diabetes, it is patient education that plays a key role. Our experience shows that

patients are open-minded, keen to ask questions, and their mistakes often stem from a lack of awareness. Despite the annually updated guidelines published by the Polish Diabetes Association, their practical implementation is sometimes insufficient; this is why re-educating patients is extremely important. After all, knowledge is medicine.

The project enabled us to develop in many areas: broadening our theoretical knowledge, developing our interpersonal skills and gaining an insight into the realities of a doctor's work. Initially, the new situation was stressful for us and presented a major challenge, but over time we gained confidence and became convinced that we were on the right career path.

After many hours spent at the clinic, we would return home tired but, at the same time, satisfied. Positive feedback from patients provided us with additional motivation. We were particularly surprised by the high level of trust they placed in us – they were open, willing to undergo examinations and took an interest in the information we shared.

We hope to put the experience and skills we've gained to good use in our future careers. We'll look back on our time on the KUMPEL programme with great fondness – the teamwork was a source of satisfaction for us, and the people we met will be an inspiration to us as we move forward in our careers.



Roksana Ciesielska checking a patient's blood pressure



RED TEAM

Mentor: Prof. Anna Kilanowicz-Sapota, MD, PhD

Supervisors: Dr Marzenna Nasiadek, MD, PhD; Dr Małgorzata Kucharska, MD, PhD

Topic: "Organic food: facts or myths? A toxicological analysis of toxic and essential elements." Students: Zofia Kubicka –

Łódź University of Technology Public Secondary School,

Hanna Frąckowiak – T. Kościuszko Secondary School No. 3 in Łódź

In March 2025, we took part in the 8th edition of the KUMPEL programme as the Red Team, under the mentorship of Prof. Anna Kilanowicz-Sapota. Our supervisors were Prof. Marzenna Nasiadek and Dr Małgorzata Kucharska, who work at the Department of Toxicology, Faculty of Pharmacy, Medical University of Łódź. We found the topic of our research not only highly topical but also thought-provoking: "Organic food: facts or myths? A toxicological analysis of toxic and essential elements".

An increasing number of people, including young people, are taking an interest in the composition of the food they consume. There are many reasons for this, including growing public awareness of the enormous impact that the quality of the food we eat has on our health. Consequently, so-called organic food has begun to enjoy great popularity, increasingly being described as a healthier alternative to conventional food. Shops are stocking far more products labelled 'organic' or 'eco', and many of us, despite the higher price of such products, choose to buy them in the hope that they are healthier. Colloquially, the term

'organic food' is often used interchangeably with 'healthy food'. However, whilst the former refers to food that is certified and subject to an official inspection system, the latter is essentially just

a term coined for marketing purposes and does not impose any specific standards on their production. This is probably why many myths and beliefs have arisen around organic food, which are not always reflected in scientific research. Hence, the topic we have undertaken was intended to answer, at least in part, the question: is 'organic' food actually better than conventional food?

Before we began our work in the laboratory, we familiarised ourselves with the literature on such studies. We learnt the difference between toxic and essential elements, and the levels of various metals found in different food products. What are TWI (tolerable weekly intake), ADI (acceptable daily intake) and NDP (maximum permissible level of metal contamination), and what do these values refer to? It is also important to understand the potential health effects of exposure to toxic metals considered particularly hazardous to humans, such as cadmium or lead. Another interesting question was whether it is possible to 'overdose'

essential elements'? It was particularly interesting to learn about the work carried out by the European Food Safety Authority (EFSA), which has been setting the direction for research in this field for many years. Food contamination, including with cadmium and lead as a consequence of environmental pollution, has long been the subject of extensive research. For this reason, EFSA has established TWI values for the metals posing the greatest threat to health, which are intended to protect the general population from their toxic effects. In recent years (2024–2025), further recommendations have been drawn up for nickel and copper in food; whilst these are elements essential for the body, an excess of them can lead to serious health problems.

In the next stage, following the theoretical preparation, we selected: firstly, the elements we would be analysing. Cadmium and lead, as toxic elements widespread in the environment, were an obvious choice. Meanwhile, the latest EFSA recommendations pointed us towards other metals of interest to us, namely copper and nickel. The choice of magnesium stemmed from its widespread use as a supplement. Secondly, a review of the literature suggests that vegetarians are a group at particular risk from cadmium and lead, due to their high consumption of vegetables, particularly root vegetables. We therefore decided to focus on foods popular amongst vegetarians, namely vegetables (beetroot, carrots), fruit (avocados, strawberries), dairy products (skyr, natural yoghurt), muesli, salmon from fish, and additionally something 'sweet and healthy', namely chocolate. This range of samples led us to the third element, namely the choice of analytical method. The analytical technique most commonly used for the quantitative analysis of elements is atomic absorption spectrometry (AAS), in two variants depending on the concentrations being analysed, namely the graphite furnace atomic absorption spectrometry (GFAAS) method or the flame atomic absorption spectrometry (FAAS) method.

Before we began our work in the laboratory, our supervisors familiarised us with the basics of laboratory work, as well as the principles of sample preparation for metal analysis. We learnt how to protect samples from contamination and about the need for in-house quality control, which involves method validation and the use of reference materials, etc. This made us realise just how much work and time is required to obtain a reliable final result.

Over the course of several sessions, under the watchful eye of our supervisors, we prepared analytical samples from food we had previously

purchased food. We then subjected the samples to mineralisation in a special microwave oven, and only these mineralised samples, after appropriate dilution, were sent for further analysis. We prepared the reference material and control samples using the same procedure. In total, our tests covered over a hundred samples(!).

We carried out the absorbance measurements mainly using an atomic absorption spectrometer with graphite furnace atomisation (GFAAS); only for magnesium, which was present at high levels (mg/l), did we use flame atomic absorption spectrometry (FAAS).

The results of our study, whilst in most cases consistent with the literature, were surprising in a few instances. Among other things, it turned out that in vegetables labelled as 'organic', the concentration of Cd was almost six times higher than in conventional products. Similarly, the level of Cd in organic chocolate, both dark and milk, was significantly higher than in the corresponding conventional chocolates. Another product in which the concentration of this toxic element was high was organic mountain flakes. Compared to the maximum permitted level (MPL) for cadmium in food intended for children, the concentration of this metal was almost twice the limit.

On the other hand, the analysis of lead concentrations in the products tested was a pleasant surprise: although lead is a very widespread element in the environment, it turned out that the Pb concentrations in the food we tested were at least ten times lower than the permissible NDP values. Meanwhile, tests for essential elements (Ni, Cu, Mg) in food showed that their highest concentrations were found in chocolate and mountain flakes, whilst their concentrations in both conventional and organic products were similar.

A comparative analysis of our results for organic and conventional products shows that both types of food tested contain contamination with toxic metals that are hazardous to health, a consequence of global environmental pollution. However, the most important conclusion from our research is that the concentrations of the toxic metals analysed – regardless of the type of food (organic or conventional) – did not exceed the maximum permitted levels (MPLs) set for food intended for the general

. This means that the food tested is safe for human health. Our research has also made us realise how important food quality control is, particularly for food intended for children, including organic food.

In Poland, several institutions oversee food safety. One of them is the National Veterinary Institute – National Research Institute in Puławy (PIWet). As part of the programme, we had a unique opportunity to see what this institution looks like from the inside. During the one-day trip, we were given a guided tour of the laboratories by Prof. Piotr Jedziniak, Head of the Department of Chemical Research, Food and Feed, and his deputy, Dr Małgorzata Warenik-Bany, both specialists in the field of toxicology, who told us about their work and the research techniques they use. The visit to Puławy made a huge impression on us.

Taking part in the KUMPEL programme was a very interesting experience for us, and at the same time a completely new one, because working with such advanced equipment in a laboratory is something we had never encountered at school before, not even in extra-curricular activities. Thanks to the commitment of our mentor and our supervisors, we gained a better understanding of what the research process involves and just how much precision, diligence and patience are required to obtain reliable and credible results.

During our sessions, we saw how the knowledge we'd learnt at school was put into practice, which turned theory into reality. The KUMPEL programme was a great opportunity for us to develop, acquire new skills and information, and gain a closer insight into a career as a researcher, which allowed us to decide whether such a path might be of interest to us in the future.



Zofia Kubicka and Hanna Frąckowiak – members of the Red Team



Hanna Frąckowiak
- Tadeusz Kościuszko High School No. 3 in Łódź



- Łódź University of Technology Public Secondary School



In front of the headquarters of the National Veterinary Institute
- State Veterinary Research Institute in Puławy. Małgorzata Kucharska, Zosia Kubicka, Małgorzata Warenik-Bany (PIWet), Hania Frąckowiak, Anna Kilanowicz-Sapota, Marzenna Nasiadek, Piotr Jedziniak (PIWet).



BLUE TEAM

Mentor: Prof. Jakub Fichna, MD, PhD

Supervisors: Dr Aleksandra Tarasiuk-Zawadzka, MD, Natalia Zbaliszyn

Topic: "In search of effective anti-inflammatory drugs – research into new innovative molecules." Students: Anastazja Woźniczka – Public Secondary School of the University of Łódź,

Wiktor Pełka – No. XXXIII Home Army Secondary School in Łódź

Our participation in the KUMPEL project at the Medical University of Łódź allowed us to become directly involved in scientific research. Our work focused on two main areas: a theoretical analysis of the effect of medicinal plants on diabetes, and practical laboratory research into anti-inflammatory molecules.

In our review paper, we addressed the use of phytotherapeutics in the treatment of diabetes. We characterised the types of diabetes and the pathogenesis of the disease. We also discussed the mechanism of action of selected medicinal plants in different types of diabetes (including their effect on glucose metabolism).

During the programme, we learnt the principles of cell culture. We carried out cell thawing and performed passages, for which we prepared the medium ourselves. Initially, we worked on fibroblast culture, followed by RAW cell line culture; this allowed us to see for ourselves that different cell types grow at different rates. We used cell cultures (the RAW 264.7 cell line) and methods such as the Neutral Red Uptake (NRU) assay to assess cell viability, and the Griess reagent test to analyse nitric oxide production.

Thanks to our participation in the KUMPEL programme, we were also able to

get involved in the 'November: Nutrition Month at UMED' initiative.

This work would not have been possible without the support of my academic mentor and supervisors at the Medical University of Łódź (Prof. Jakub Fichna, Dr Aleksandra Tarasiuk-Zawadzka and Natalia Zbaliszyn). The experience gained through laboratory work and the analysis of results has enabled us to understand just how long and arduous the path is to introducing new, innovative therapeutic molecules.





YELLOW TEAM

Mentor: Prof. Karolina Czarnecka-Chrebelska

Supervisor: Dr Ewa Pikus, PhD in Biology

Title: "The respiratory tract oncobiome, its impact on local immune modulation and the development of lung cancer – the search for new biomarkers of carcinogenesis"

Students: Maja Klepczarek – M. Kopernik High School No. 1 in Łódź,

Natalia Trawińska – Bolesław Chrobry High School No. 1 in Piotrków Trybunalski

THE MOLECULAR WORLD IN YOUNG HANDS

Our adventure into the amazing world of molecular genetics and biotechnology as part of the KUMPEL project began in the spring of 2025. It was then that we joined the Yellow Team, where, over the following year, we were able to engage in dynamic scientific work at the Department of Biomedicine and Genetics under the guidance of our mentor, Dr hab.

Karolina Czarnecka-Chrebelska, PhD (Med.), Professor at the Medical University of Warsaw, and our supervisor, Dr Ewa Pikus, PhD (Biol.). Admittedly, this is only the beginning of our scientific journey, but we already know that this project has opened up new opportunities for us.

FIRST STEPS

In the initial phase of our work, it was essential to delve into the subject of our project. The numerous scientific articles provided to us by our Mentor enabled us to better understand what we would be working on and the direction our research should take. Even at this stage, we were expected to develop our own research topics based on scientific publications. However, in order to begin working in the laboratory, we also needed to learn how to use the laboratory equipment correctly. We were able to practise pipetting and the correct dilution of samples

by carrying out an ELISA (enzyme-linked immunosorbent assay) test with Dr Ewa Pikus for the membrane protein FIS1, which plays a significant role in regulating mitochondrial dynamics and the process of apoptosis. In the laboratory, we also learnt how measuring instruments work and how to interpret the results they produce. The skills we acquired paved the way for us to work in the laboratory with more challenging material, namely RNA and cDNA. During the laboratory work, we also had the opportunity to isolate DNA from a blood clot ourselves, which allowed us to better understand the stages involved in preparing material for further genetic analysis.

FROM THE IDEA TO THE FIRST STEPS

During our first sessions, we discussed in detail what the microbiome and microbiota are, as well as the significant impact that microorganisms inhabiting, amongst other places, our respiratory tracts can have on our health. We also learnt about the concept of dysbiosis, i.e. an imbalance in the microbiome, which can contribute to the development of various diseases, including cancer. All of this was essential to begin the search for a biomarker indicating the development

developing in the body. During the project, we had the opportunity to discuss numerous scientific articles with Prof. Czarnecka-Chrebelska. Analysing them in English allowed us to improve our command of the language. We also learnt how to use scientific literature search engines.

Whilst discussing the publications, we became particularly interested in the topic of free radicals and the phenomenon of oxidative stress, i.e. a disruption of the redox balance in cells. After reviewing the scientific literature on this topic, we were able to put the skills we had acquired into practice and began writing a short review article on free radicals and their impact on the body. We learnt about the ways in which they are formed and the locations where this occurs, including those linked to mitochondrial function. We also searched for information on the link between oxidative stress and damage to specific cellular structures, as well as mutations, chronic diseases and cancerous processes. We also focused on the action of antioxidants and their role in the prevention of diseases associated with free radicals.

IN SEARCH OF A POTENTIAL BIOMARKER FOR CARCINOGENESIS - *in silico* ANALYSES

Our mentor showed us databases such as GeneCards, MalaCards and KEGG PATHWAY, which we used whilst searching for proteins and genes that might be associated with the process of carcinogenesis in the lungs. After searching the databases and following an extensive brainstorming session, we decided to investigate the expression of as many as eight genes:

NLRP3, STAT3 and **TGF- β** , which are mediators of inflammation and the immune response. The NLRP3 inflammasome triggers an immune response, leading to inflammation, and also causes cell death via pyroptosis. Its activation leads to the production of pro-inflammatory cytokines, such as IL-1 β and IL-18. The STAT3 protein is activated by interleukin IL-6, which induces the expression of further inflammatory cytokines; it causes increased cell proliferation, enhances the expression of anti-apoptotic proteins, and also promotes angiogenesis, which favours tumour transformation. In contrast, TGF- β induces the synthesis of chemokines, suppresses the immune response, and promotes angiogenesis and metastasis.

OPA1, SIRT3 and **SUCLG2**, which are genes involved in the response to oxidative stress. The OPA1 protein is found in the inner mitochondrial membrane, where it is responsible for the fusion of these organelles for the purpose of their repair, and also counteracts cell apoptosis in response to oxidative stress,

by the production of reactive oxygen species. The SUCLG2 gene encodes the GTP-specific beta subunit of succinyl-CoA ligase, a mitochondrial enzyme that plays a key role in the Krebs cycle and protein metabolism. SUCLG2 may influence the proliferation of cancer cells by regulating mitochondrial metabolism. The SIRT3 protein, on the other hand, regulates the functions of numerous mitochondrial proteins, influencing cellular metabolism and the response to oxidative stress. It controls the production of reactive oxygen species, thereby protecting against DNA and protein damage and lipid peroxidation.

MMP2 and **TIMP3** are genes that regulate extracellular matrix remodelling. The MMP2 protein is a matrix metalloproteinase involved in the breakdown and remodelling of the extracellular matrix through the degradation of type IV collagen, thereby facilitating the formation of metastases. TIMP3, on the other hand, acts as an antagonist to MMP2, functioning as a matrix metalloproteinase inhibitor, and is responsible for maintaining tissue stability. It exerts an anti-tumour effect by inhibiting the invasion and migration of cancer cells. The balance between MMP2 and TIMP3 plays a key role in the stability and normal function of the extracellular matrix.

LABORATORY ANALYSES AND PROCEDURES

Under the supervision of Prof. Karolina Czarnecka-Chrebelska, we carried out measurements and analyses in the laboratory – we began by measuring mRNA concentrations in samples taken from lung cancer patients, specifically from tumour tissue and the margins of the lesion. We used two different methods for measuring RNA – spectrophotometric and fluorometric – which not only enabled us to measure concentrations more accurately and compare the results, but also allowed us to learn how to operate two different pieces of laboratory equipment. We carried out the reverse transcription reaction several times, which enabled us to obtain cDNA, which is much more stable than RNA. Subsequently, to assess the expression of the genes we had selected, we prepared real-time qPCR reactions for the target genes – and as there were eight genes under investigation, we spent a considerable amount of time in the laboratory. When analysing the results of our experiments, we observed that: the expression of the genes under investigation differs between tumour tissue and the margin of the lesion, and gene expression levels also differ significantly between women and men (NLRP3, TIMP-3, SIRT3, SUCLG2). The expression of the genes regulating the inflammatory process, STAT3 and TGF- β , was reduced, as was that of two genes involved in the oxidative stress response: SIRT3 and SUCLG2,

which may indicate limited capacity to repair oxidative damage and control the carcinogenic process. Conversely, the expression of the OPA1 gene, responsible for mitochondrial fusion in repair processes, was significantly higher. The results of our analyses raise many new questions, such as whether the expression of the genes studied depends on sex or the patient's BMI, regardless of the stage of the cancer. Further research will be necessary in the future to identify potential biomarkers from among the genes studied.

HOW HAS KUMPEL INFLUENCED OUR PERSONAL DEVELOPMENT?

The KUMPEL project gave us great confidence in our own abilities, which has carried over into other areas of our lives. Thanks to it, we know that we are capable of formulating research questions independently, carrying out analysis and drawing conclusions. Working on the project taught us perseverance and patience in pursuing our goals and made us realise that obstacles are a natural part of the journey. On top of that, we met lots of people with



Natalia Trawińska, Maja Klepozarek – members of the Yellow Team

similar passions, who were happy to share their knowledge with us. During a day in the laboratory with sixth-formers from the Internship Programme, we were able to exchange our observations and learn a great deal from one another. On that day, we also had the opportunity to isolate DNA from a blood clot ourselves, which allowed us to better understand the stages involved in preparing material for further genetic analysis. At the end of our adventure, we were able to present the project in schools, which gave us confidence and showed that we are capable of rising to challenges. Public speaking skills will prove to be a useful competence should we ever have to speak at conferences in front of a larger audience. The experience we gained through this project will certainly stay with us for life and remind us of the many wonderful people and precious moments we spent in the laboratory. What's more, new paths have opened up before us, which we can now begin to follow to fulfil our dreams.

HOW DID THE INTERNSHIP AFFECT OUR UNDERSTANDING OF SCIENTIFIC RESEARCH?

Thanks to our participation in the KUMPEL project, we gained a thorough understanding of the methods used in scientific research. We were able to go through the entire laboratory research process – from understanding the research problem, through searching for information in scientific databases, to analysing the results. This unique experience taught us just how crucial theoretical preparation is before embarking on practical work in the laboratory. Discussing the results we obtained was inspiring and allowed us to draw valuable conclusions about the selected genes. Analysing our results raised new questions for us, encouraging us to explore the topic further. Working in the laboratory not only broadened our skills but also sparked our enthusiasm and gave us the confidence that science is a wonderful adventure for the future.





THE PURPLE TEAM

Mentor: Prof. Jacek Drobnik

Supervisors: Dr Małgorzata Gałdyszyńska, Lucyna Piera, MSc (Eng)

Title: "The effect of integrin alpha1beta1 on collagen synthesis by cardiac fibroblasts – the search for new methods of treating cardiac fibrosis."

Students: Lena Karasek – S. Wyspiański Secondary School No. 12 in Łódź,

Aleksandra Kacprzak – L. Zamenhof High School No. 31 in Łódź

Our participation in the 8th edition of the KUMPEL programme began a year ago, when our mentors and supervisors decided that we would join the Purple Team. Our mentor was Dr Jacek Drobnik, MD, PhD, and our supervisors

- Dr Małgorzata Gałdyszyńska and Dr Lucyna Piera. The topic we worked on throughout our year-long adventure in KUMPEL was: 'The effect of integrin $\alpha1\beta1$ on collagen synthesis by cardiac fibroblasts – the search for new methods of treating cardiac fibrosis'.

To help us better understand the topic, our mentor and supervisors provided us with materials explaining the theoretical aspects. We learnt about integrins – which are so important in this research – and cardiac fibrosis. Integrins are a family of 24 proteins that act as transmembrane receptors, facilitating connections between cells and the extracellular matrix. Cardiomyocytes express, amongst others, the $\alpha1\beta1$ integrin, which binds to collagen, laminin and fibronectin. Cardiac fibrosis is a common feature of cardiovascular diseases such as myocardial infarction, hypertrophic cardiomyopathy, and diabetic and dilated cardiomyopathies. It involves the excessive deposition of extracellular matrix proteins, primarily collagen. Substitutive fibrosis protects the heart

from rupture, whilst its interstitial form stiffens the muscle, impairs systolic and diastolic function, and disrupts impulse conduction, increasing the risk of arrhythmias.

During our year-long research project, we utilised a variety of laboratory methods, which enabled us to familiarise ourselves with laboratory techniques that were new to us. The research was based on cell culture of human cardiac fibroblasts and an analysis of the effect of obtustatin – an alpha-1 beta-1 integrin inhibitor – on collagen synthesis by these cells.

Obtustatin is derived from the venom of the blunt-headed viper (*Macrovipera lebetinus obtusa*). The venoms of snakes and vipers often contain substances that act as inhibitors used in medical research. In our experiments, we aim to demonstrate that it is worthwhile to attempt the synthesis of such compounds – inspired by venom components – which can block the action of specific receptors. Research into this type of compound, however, involves numerous

organisational and financial difficulties. Obtaining venom requires the isolation of suitable snake species, many of which are protected under species conservation laws. For this reason, conducting experiments based on natural biological material is a complex and costly process, which further justifies the need to seek methods for the synthetic production of such substances.

The first method employed was the measurement of collagen gene expression. In the analysis, we used the following reference genes: GAPDH, Ywhaz and Rplp0, as well as the Col1a1 (type I collagen) and Col3a1 (type III collagen) genes.

The method comprised three main stages: RNA isolation from cells, reverse transcription (conversion of RNA to cDNA) and measurement of gene expression using real-time PCR.

Another method used in our study was flow cytometry, which was used to confirm the presence of integrin $\alpha 1\beta 1$ in the cells under investigation.

To assess collagen levels, we used the Wöessner method, which is based on the determination of hydroxyproline – an amino acid characteristic of collagen. This method allows the determination of both extracellular and intracellular collagen levels. The procedure involved hydrolysis of the samples in HCl for 24 hours at 100°C, followed by neutralisation with NaOH and the addition of chloramine. In the next stage, hydroxyproline was oxidised by chloramine T to pyrrole, triggering a colour reaction, after which a spectrophotometric measurement of the optical density of the resulting complex was carried out at a wavelength of 560 nm.

To determine type I collagen telopeptides, we used the ELISA method, an enzyme-linked immunosorbent assay technique that enables the detection and quantitative measurement of protein in a sample. Collagen telopeptides are by-products of its synthesis; therefore, measuring them allows us to assess the activity of the collagen formation process – enabling us to determine whether synthesis is accelerated or inhibited.

To detect and identify the TANGO I protein, we used the Western blot method, which involves isolating proteins from cells, separating them on a polyacrylamide gel, transferring them to a membrane, and visualising them using antibodies specific to TANGO I. This protein is responsible for transporting collagen from inside the cell to the outside. Analysis of TANGO I levels also allows conclusions to be drawn about the efficiency of collagen synthesis and transport—



of the gene in the fibroblasts under investigation, and on the potential effect of the substances under investigation, such as obtustatin, on these processes.

The results suggest that the inhibition of the $\alpha 1\beta 1$ integrin by obtustatin exerts a significant regulatory effect on collagen content in cardiac fibroblast cultures. This substance modifies both gene expression and the late stages of collagen protein synthesis. The results obtained indicate that obtustatin may act as an antifibrotic agent; however, further research is required to assess its full potential.

Some of the results we obtained were used to prepare an abstract of which we are co-authors. The abstract, entitled 'The effect of $\alpha 1\beta 1$ integrin inhibition on IL-6 levels in human cardiac fibroblasts', was presented at the 29th Symposium of the Experimental Cardiology Section of the Polish Cardiac Society.

The project, carried out as part of the KUMPEL programme, allowed us to gain an 'insider's view' of the research process. Thanks to the project, we gained valuable experience and developed our interpersonal skills. KUMPEL enabled us to refine our skills in working within a research team and to adopt a responsible approach to the tasks entrusted to us, which may prove useful in our future education. The topic under investigation allowed us to explore issues that went well beyond our previous knowledge. We are very grateful for the opportunity to take part in the KUMPEL project and appreciate every moment spent working on it.



Prof. Adam Durczyński
- Vice-Rector for Student Affairs



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Presentation of acknowledgements in the Purple Group



Róksana Ciesielska
- Secondary School No. XXVI in Łódź,
Aleksandra Fuks
- Secondary School No. 21 in Łódź



Aleksandra Kacprzak
- No. 31 Secondary School in Łódź,
Lena Karasek
- No. 12 Secondary School in Łódź

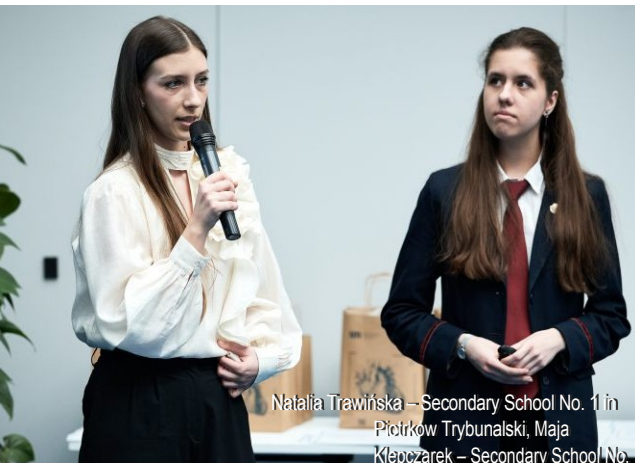
- 1 - Prof. Adam Durczyński – Vice-Rector for Student Affairs, Wiktor Pelka – Secondary School No. 33 in Łódź, Anastazja Woźniczka – University of Łódź State Secondary School, Prof. Jakub Fichna
2 - Prof. Karolina Czarnecka-Chrebelska, Natalia Trawińska – No. 1 Secondary School in Piotrków Trybunalski, Maja Klepczarek – No. 1 Secondary School in Łódź, Prof. Adam Durczyński – Vice-Rector for Student Affairs
3 - Hanna Frąckowiak – Secondary School No. 3 in Łódź; Zofia Kubicka – Public Secondary School of the Technical University of Łódź



Anna Pielesiek-Kisima
- Project coordinator
KUMPEL,
Joanna Milczarek
- Director of the Promotion Office



4



Natalia Trawińska – Secondary School No. 1 in
Piotrków Trybunalski, Maja
Klepczarek – Secondary School No.
1 in Łódź



5



6



Anastazja Woźniczka – Public Secondary
School No. UŁ, Wiktor Pełka –
Secondary School No. XXXIII in Łódź

- 4 - Prof. Anna Kilanowicz-Sapota, Zofia Kubicka – Public Secondary School No. PŁ, Hanna Frąckowiak – Secondary School No. III in Łódź, Prof. Adam Durczyński – Vice-Rector for Student Affairs
5 - Adrian Ołubiec, Aleksandra Oto, Aleksandra Fuks – 21st Secondary School in Łódź, Roksana Ciesielska – 26th Secondary School in Łódź, Dr Monika ŻURAWSKA-KLIŚ
6 - Prof. Jacek Drobnik, Lena Karasek – Secondary School No. 12 in Łódź, Aleksandra Kacprzak – Secondary School No. 31 in Łódź, Prof. Adam Durczyński – Vice-Rector for Student Affairs



Ewa Łoś
- Headteacher of Secondary School No. 31 in Łódź, Prof. Adam Durczyński - Vice-Rector for Student Affairs



Ilona Majewska
- Biology teacher at Secondary School No. XXI in Łódź, Prof. Adam Durczyński - Vice-Rector for Student Affairs



Dr Małgorzata Wrzesień
- Headteacher of the University of Łódź Public Secondary School, Prof. Adam Durczyński - Vice-Rector for Student Affairs



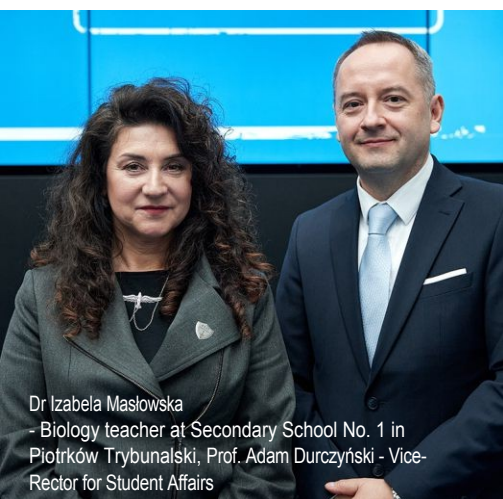
Prof. Adam Durczyński - Vice-Rector for Student Affairs, Dr Izabela Masłowska - biology teacher at Secondary School No. 1 in Piotrków Trybunalski, Maja Klepczarek - Secondary School No. 1 in Łódź, Natalia Trawińska - Secondary School No. 1 in Piotrków Trybunalski, Prof. Karolina Czarnecka-Chrebelska

1 - Prof. Adam Durczyński – Vice-Rector for Student Affairs, Dr Małgorzata Kucharska, Zofia Kubicka – Łódź University of Technology Public Secondary School, Renata Waczyńska-Wróblewska – biology teacher at the Łódź University of Technology Public Secondary School, Hanna Frąckowiak – Secondary School No. 3 in Łódź, Prof. Anna Kilanowicz-Sapota, Izabella Kapłon – Headteacher of the Łódź University of Technology Public Secondary School, Dr Marzenna Nasiadek

2 - Sławka Włodarczyk – biology teacher at Secondary School No. 3 in Łódź, Barbara Kulikow – Secondary School No. 3 in Łódź, Maria Włodarczyk – Headteacher of Secondary School No. 3 in Łódź, Prof. Adam Durczyński – Vice-Rector for Student Affairs, Hanna Frąckowiak – Tadeusz Kościuszko Secondary School No. 3 in Łódź



Dr Wioletta Kudzin
- Biology teacher at
Secondary School
No. 31 in Łódź, Prof.
Adam Durczyński
- Vice-Rector for Student Affairs



Dr Izabela Masłowska
- Biology teacher at Secondary School No. 1 in
Piotrków Trybunalski, Prof. Adam Durczyński - Vice-
Rector for Student Affairs



Anna Bomanowska
- biology teacher at
the University of Łódź
Public Secondary
School



Sławka Włodarczyk – biology teacher at Secondary School
No. 3 in Łódź, Prof. Adam Durczyński – Vice-Rector for
Student Affairs



Marzena Mosakowska
- Biology teacher at
Secondary School
No. XXVI in Łódź,
Prof. Adam Durczyński
- Vice-Rector for Student Affairs



3 - Anna Bomanowska – biology teacher at the Public Secondary School of the University of Łódź, Dr Małgorzata Wrzesień – Headteacher of the Public Secondary School of the University of Łódź, Prof. Adam Durczyński – Vice-Rector for Student Affairs, Natalia Zbaliszyn, Anastazja Woźniczka – Łódź University Public Secondary School, Wiktor Pełka – Łódź Secondary School No. XXXIII, Prof. Jakub Fichna, Małgorzata Sieradzka – biology teacher at the 33rd Secondary School in Łódź

4 - Zofia Kubicka – Public Secondary School of the Technical University of Łódź, Renata Waczyńska-Wróblewska – biology teacher at the Public Secondary School of the Technical University of Łódź, Prof. Adam Durczyński – Vice-Rector for Student Affairs, Izabella Kapłon – Headteacher of the Public Secondary School of the Technical University of

Łódź, Rafał Bakalarz – Public Secondary School of the Technical University of Łódź

**Drzwi
Otwarte**

2026



**15 years
UMED Open Day**



Karolina Staroń,
Promotion Office

15. edition of the UMED Open Day demonstrated how the scale of this event is growing year on year and how firmly it is

the university's communications strategy. This year's event combined the popularisation of science, practical medical education and direct contact between prospective students and the UMED academic community.

Back in 2023, following the return to an in-person format, the organisers prepared 31 workshops and nearly 40 stands for almost 2,000 participants. A year later, attendance exceeded 2,000 visitors, and by 2025 the programme had expanded to 45 workshops, around 70 stands and 2,300 registered participants. In the anniversary year of 2026, the scale of the Open Day grew once again. Members of student societies and organisations prepared as many as 55 workshops and nearly 80 stands for almost 2,800 participants. Nearly 100 units from our university were involved in organising the event. This allows us to recognise the 15th edition of the Open Day as one of the university's most effective recruitment and image-building initiatives.

The anniversary edition of the event was officially opened by the Vice-Rector for Student Affairs, Prof. Adam Durczyński, who welcomed prospective students to the Medical University of Łódź and encouraged them to actively explore the university through hands-on activities, discussions and first-hand experience. The opening ceremony was also attended by representatives of the university, the city and the region – Deputy Mayor of Łódź Adam Wieczorek

(a graduate of our university), Beata Świdarska, Director of the Department of Education at the Marshal's Office of the Łódź Voivodeship, Prof. Agnieszka Piastowska-Ciesielska, Vice-Rector for Research at the Medical University of Łódź, Paweł Zawieja, Chancellor of the university, and Jakub Robak, Chair of the University Student Council – emphasising the importance of the Open Day as one of the key events promoting UMED and academic life in Łódź.

Medicine you can experience first-hand

The greatest strength of this year's Open Day was its hands-on format. The programme was not limited to talks about degree programmes, but allowed prospective students to step into the world of medicine through practical activities.

Workshops on BLS and airway clearance, the basics of nursing, learning how to carry out an ENT examination, dental sessions, and workshops on microbiology, catheterisation and obstetrics proved that the aim of the event was to showcase medicine as a field of practical skills, precision and teamwork.

The most spectacular and, at the same time, the most 'media-friendly' moment of the anniversary edition was the breaking of the Polish record for simultaneous surgical suturing. In Auditorium 1000, 300 participants performed suturing simultaneously, whilst a total of 400 people took part in the surgical suturing workshops across the two auditoriums, where they were able to assess their skills in independently suturing wounds.

MED.x and the modern language of science communication

A new feature of the 15th edition was MED.x – a series of short, popular science talks inspired by the TEDx format, demonstrating that our aim is not only to teach medicine, but also to talk about it in a modern way. Our researchers addressed topics relating to transplantology, interdisciplinary research, the microbiome, rare diseases and students' academic development pathways.

In this anniversary edition, MED.x thus broadened the significance of the Open Day – from a strictly recruitment-focused event to a platform for popularising science, capable of appealing to prospective students as well as their teachers and parents.

Admissions: building relationships The Open Day is one of the most important events in the university's admissions calendar and a vital opportunity for direct contact with prospective students. Applicants did not merely receive a pack of information on entry requirements and documentation. They were able to talk to current students and see the teaching spaces



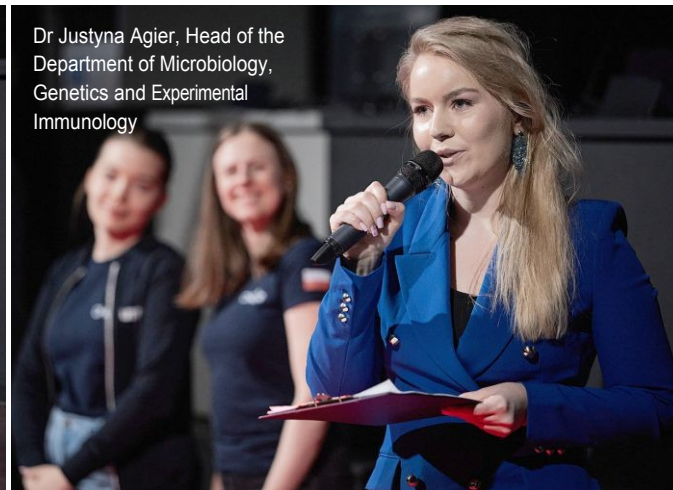
workshop were Dr Łukasz Łaziński from the Clinic of Plastic, Reconstructive and Aesthetic Surgery, Joanna Milczarek – Director of the Promotion Office, and Prof. Adam Durczyński – Vice-Rector for Student Affairs

, listen to presentations by researchers, visit the stands of student organisations, and take part in a session on admissions to the medical degree programme under the Ministry of National Defence quota. UMED thus presented itself not only as an educational institution, but as a vibrant community of people, places and opportunities.

The scale of this anniversary edition of the Open Day would not have been possible without the tremendous commitment of the academic community at the Medical University of Łódź. Student organisations, student research societies, university departments and event partners all played a part in preparing the workshops, stands, demonstrations and meetings with prospective students, jointly creating a programme based on practical experience and direct contact with future students.



Prof. Adam Durczyński,
Vice-Rector for Student Affairs at the Medical University of Łódź



Dr Justyna Agier, Head of the
Department of Microbiology,
Genetics and Experimental
Immunology



Polish record for surgical suturing



Prof. Małgorzata Brauncajs, MD,
PhD, Vice-Dean for Teaching at the Faculty of
Medicine, Faculty of Medicine, Department of Microbiology
and Laboratory Medical Immunology

We were joined by representatives from:

student organisations:

- The Medical University of Łódź Choir
- EMSA Łódź
- IAESTE Łódź
- AZS University Club of the Medical University of Łódź
- International Federation of Medical Students' Associations (IFMSA-Poland), Łódź Branch
- Young Pharmacists Łódź
- Polish Society of Pharmacy Students (PTSF Łódź Branch)
- Polish Society of Dental Students (PTSS, Łódź Branch)
- Student Council of the Medical University of Łódź
- Student Society of Laboratory Diagnosticians
- Student Scientific Society of the Medical University of Łódź

student research societies:

- Student Research Group on Diabetes
- Medical Chemistry Research Club
- Clinical and Laboratory Genetics Research Group
- Formulation Research Group at the Department of Community Pharmacy
- Student Nursing Society
- Nursing Students' Society at the Polish Nursing Association of the Medical University of Łódź
- Inter-departmental Rare Diseases Research Society
- "PRO-Ageing" Student Research Society
- Student Research Group in Medical Biology and Parasitology
- Medical Biotechnology Student Research Group
- Pharmaceutical Botany Student Research Group and the Department of Pharmaceutical Biology and Botany
- Student Research Group in Minimally Invasive Surgery
- Student Research Group in Oncological Surgery
- Student Research Group in Lifestyle-Related Diseases

- Student Research Group in Dietetics
- GenUse Student Research Group
- Student Research Group in Gynaecological Oncology and Endometriosis
- Immuno-Biotech Student Research Group
- Prenatal Cardiology Student Research Group
- SKN Let's Talk Science!
- SKN Laboratory Medicine
- Family Medicine Student Research Group
- Forensic Medicine Student Research Group
- Student Research Group in Lifestyle Medicine
- Medical Microbiology Student Research Group
- Move It Student Research Group
- Transplant Nephrology Student Research Group
- Neonatal Science Student Research Group, ICZMP
- Student Research Group in Neurosurgery at the N. Barlicki University Clinical Hospital No. 1
- Student Research Group in Neurology, WAM
- SKN in Neurorehabilitation
- Non-invasive Cardiology Student Research Group
- SKN Nutrigenomics
- SKN Otolaryngology, Head and Neck Oncology
- SKN Paediatric Oncohaematology
- SKN Physio Umed
- SKN at the First Department of Gynaecology and Obstetrics
- Student Research Group at the Second Department of Cardiology
- Student Research Group at the Clinic of General and Transplant Surgery
- Student Research Group at the Clinic of Gastrointestinal Diseases
- Student Research Group at the Clinic of Internal Medicine and Clinical Pharmacology
- Student Research Group at the Clinic of Paediatrics, Immunology and Nephrology
- Student Research Group at the Department of Paediatrics, Oncology and Haematology
- Student Research Group at the Department of Biopharmacy
- Student Research Group at the Department of Molecular Biology
- Student Research Group at the Department of Bioinorganic Chemistry
- Student Research Group at the Department of Pharmacognosy
- Student Research Group at the Department of Operating Theatre Nursing
- Student Research Group at the Department of Practical Midwifery
- Student Research Group at the Department of Dental Technology

- Psychiatry Student Research Group
- Student Research Group in Child and Adolescent Psychiatry
- Holistic Psychiatry Student Research Group
- Psychodermatology Student Research Group at the Department of Psychodermatology and Neuroimmunobiology of the Skin
- Emergency and Disaster Medicine Student Research Group
- Medical Rehabilitation Student Research Group with the Medical Rehabilitation Clinic
- Student Research Group in Sociology and Medicine
- Student Research Group in Medical Simulation
- Thoracic Surgery Student Research Group

university departments:

- UM Academic Careers Office
- Centre for the Organisation and Support of English-Language Studies, Medical University
- IT Centre
- MOLEcoLAB Centre for Research into Lifestyle-Related Diseases
- Admissions and Education Department
- Population Health Observatory under the Department of Epidemiology and Biostatistics, Medical University of Poznań
- Regional Centre for Digital Medicine
- University Materials Research Laboratory
- University Laboratory of Blood Pressure Regulation and Autonomic Nervous System Function
- Department of Nucleic Acid Biochemistry
- Department of Medical Biochemistry
- Department of Biostatistics and Translational Medicine
- Department of Biomolecular Chemistry
- Department of Community Pharmacy
- Department of Physiology, Pathophysiology and Clinical Immunology
- Department of Cell Culture and Genomic Analysis
- Department of Microbiology, Genetics and Experimental Immunology
- Department of Developmental Age Nursing and Health Promotion



- Department of Psychodermatology and Neuroimmunobiology of the Skin
- BRain Laboratories Team

The partners of this anniversary edition of the event were: Młodzi w Łodzi and the City of Łódź, Fumed – Foundation for the Medical University of Łódź, the Łódź Bone Marrow Donor Centre, Student Depot, the Viva! Foundation and mBank.

The event was held under the honorary patronage of Joanna Skrzydlewska, Marshal of the Łódź Voivodeship, and Hanna Zdanowska, Mayor of Łódź.

Open Day 2026 was organised by the Promotion Office team at the Medical University of Łódź, which, together with the community-

the university's academic community, created an event combining education, practical experience and the popularisation of science.

The anniversary edition demonstrated that UMED is capable of discussing medicine in a modern, engaging and large-scale manner, a fact symbolised by the setting of a new Polish record.

The next Open Day will take place on 10 March 2027.

We invite you to get involved in organising this exceptional event right from the start.

Honorary patrons:



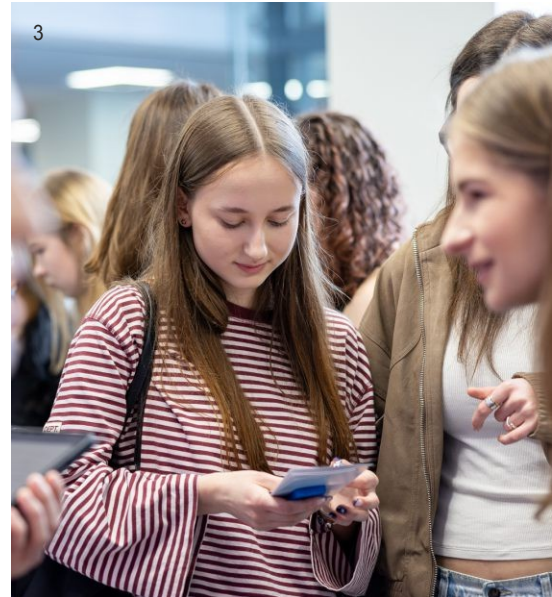
Partners:

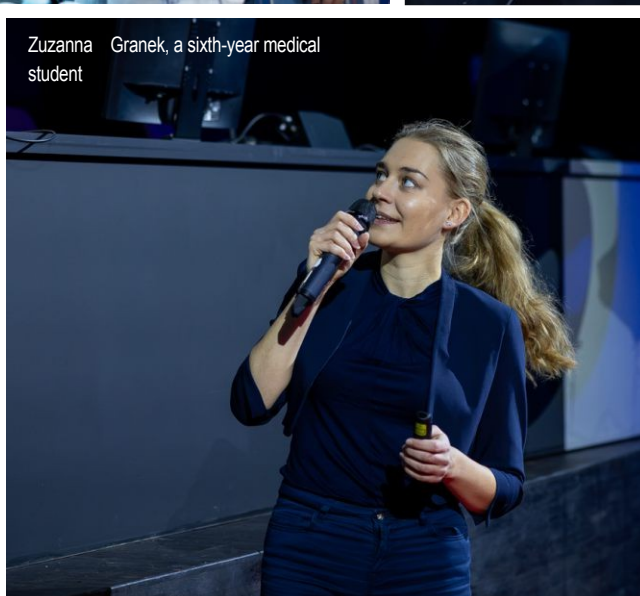


1, 2, 3, 5 – Representatives of student societies and organisations at the Medical University of Łódź
4, 6 – Open Day at UMED 2026



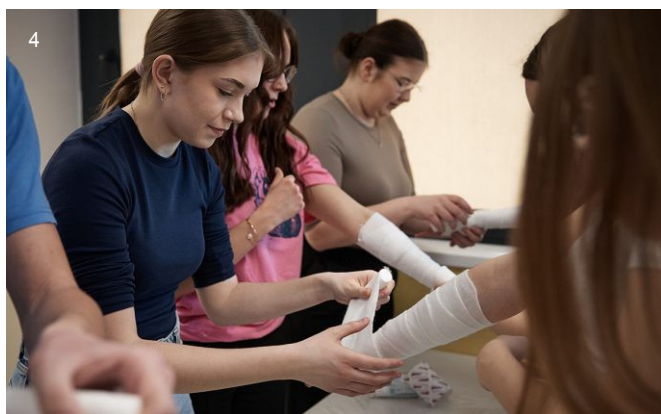
MEGA surgical suturing workshop. Led by Dr Katarzyna Kwas-Sarnacka, Department of Operative and Oncological Gynaecology, Medical University





Zuzanna Granek, a sixth-year medical student

2, 3, 4, 5, 8-10 - Open Day at UMED 2026
 7, 2, 3; 5 - Representatives of student societies and organisations at the Medical University of Łódź



1, 3 - MEGA surgical suturing workshop. Attempt to break the Polish record for surgical suturing

2, 4, 5, 6, 7 - Open Day at UMED 2026



21st Academic Job Fair

– eight months of work, one day full of opportunities

1

On 16 April 2026, the EXPO-Łódź exhibition centre once again became a meeting place for the academic and business worlds. The 21st edition of the Academic Job Fair

brought together over 100 exhibitors from across Poland and thousands of students and graduates from Łódź's universities, who were seeking inspiration, their first professional experiences, work placements, internships and job offers.

6

The Academic Job Fair, which has been held continuously since 2005, has for years remained one of the largest and most important non-commercial events of its kind in Poland. It provides a space where young people can meet employers face-to-face, learn about the expectations of the labour market and make informed plans for their career paths.

However, the success of this year's edition was down to much more than just a one-day event. Preparations for ATP 2026 began as early as September last year and lasted nearly eight months. The Academic Career Office of the Medical University of Łódź, the Foundation for the Medical University

Medical University of Łódź, the Student Section of the Polish Pharmaceutical Society 'Młoda Farmacja', the Career Office of the Łódź University of Technology, ESN Erasmus Student Network EYE Łódź, as well as the event's partner – EXPO-Łódź.

Each of the institutions responsible for the organisation had their own coordinators and teams, who worked for many months on the event programme, promotion, collaboration with exhibitors, logistics and

preparing the exhibition space. On behalf of the Medical University of Łódź, key roles were played by: Michał Okrasa from the Academic Careers Office, and Joanna Milczarek and Anna Rykiert-Nowicka, representing the Foundation for the Medical University of Łódź and the UMED Promotion Office.

This year's edition once again demonstrated that ATP is much more than just a job fair. Exhibitors included representatives from sectors such as IT, medicine, pharmacy, finance, modern technologies, engineering and FMCG.

Regular organisational meetings covered both strategic issues and dozens of details affecting the quality of the event. A promotional campaign was planned, information materials were prepared, contact with exhibitors and partners was coordinated, the layout of the stands was finalised, as were the schedule of accompanying events, volunteer activities, and logistical and technical arrangements.

This year's edition once again demonstrated that ATP is much more than just a job fair. Exhibitors included representatives from sectors such as IT, medicine, pharmacy, finance, modern technologies, engineering and FMCG. Participants were able to speak directly with recruiters, explore job vacancies, work placements and internships, and gain insight into the expectations of today's labour market.

The additional zones, which have been an integral part of the Academic Job Fair for years, also attracted a great deal of interest. In the Advisory Zone, participants could have their CVs reviewed, have professional recruitment photos taken and speak to career advisers. The event programme was complemented by training sessions



sessions and workshops led by experts and business practitioners.

Another important feature was the chill-out zone, which allowed participants to relax after interviews with employers, take part in competitions, enjoy the attractions and spend time in a less formal atmosphere. The organisers ensured that the fair was not only a professional recruitment event, but also a space for networking and building relationships.

The official opening of the fair was led by representatives of the organisers, including Michał Okrasa from the Academic Career Office of the Medical University of Łódź

– event coordinator. Guests representing the Medical University of Łódź included, amongst others:

- Prof. Adam Durczyński, MD, PhD – Vice-Rector for Student Affairs,
- Paweł Zawieja – Chancellor,
- Dr Bogusława Pietrzak, PhD (Pharm.), Professor – Vice-Dean of the Faculty of Pharmacy for the Pharmacy Programme,
- Joanna Milczarek – Chair of the Foundation for the Medical University of Łódź and Director of the Promotion Office,
- Justyna Wojtczak – Director of the Student Services Office.

Our university's stand and that of the Academic Careers Office (ABK), located in the Medical and Pharmaceutical Companies Zone, attracted a great deal of interest. There, students were able to receive career advice, find out more about the workshops and initiatives organised by UMED, and discuss opportunities for further development, including doctoral studies. UMED was represented by: the Academic Career Office (Michał Okrasa, Anna Przewoźniak, Aleksandra Burtkiewicz, Maja Nowak and Joanna Szmich), the Doctoral Student Service Centre (Jakub Jeziorski) and the Clinical Trials Support Centre (Karolina Pyć, Alicja Nowak-Zduńczyk). The Foundation for the Medical University of Łódź was also present. Alongside the university's stand, there was also a stand run by UMED – Career, which had prepared job offers for those interested in pursuing a career at our university.

Students and volunteers also played a significant role in organising the event. Over 80 people volunteered to help with the 21st edition of ATP, supporting the activities



Official opening of ATP 2026



of the ATP at the Expo Hall

, assisted exhibitors, manned information stands and ensured the smooth running of the event. As is traditional, the largest group of volunteers was provided by Młoda Farmacja Łódź, whose work was coordinated by four students: Kacper Przygoda, Aleksander Wonorski, Marcel Mazur and Igor Kaczanowski.

Crucial to the safety of participants was the involvement of the Student Society for Emergency and Disaster Medicine, which once again played an active role in organising the event. The students ensured the safety of both visitors and exhibitors, providing necessary medical assistance and responding to situations requiring intervention. The society's activities were coordinated by its chair, Anna Nowicka, under the supervision of Dr Katarzyna Starosta, MD, PhD.

Organising an event of this scale required fine-tuning hundreds of details – from ID badges, parking lists and work schedules, to the preparation of promotional materials, stand signage, fair maps, public address systems, medical zones and



Representatives of the organisers and Rossmann
– Winner of the ATP 2026 Competition for the Most Interesting Exhibition Stand

space for exhibitors and participants. Every detail was part of a larger plan aimed at creating a professional, modern and welcoming event for all participants.

For every visitor to the fair – whether a student or graduate – ATP is a one-day event held in the Expo Hall, open from 10 am to 4 pm, where they can find a job, a work placement or, sometimes, an internship. It is also possible to collect promotional items, speak to a recruiter, and take part in competitions and training sessions. The organiser sees it differently: ATP is a process comprising a series of planned stages related to marketing and promotion amongst exhibitors and students, months of work on the details, and meetings with partners. When the lights go out at the Expo hall, when the stands have been dismantled, and the fair is already a thing of the past for participants, the coordinators' work continues.



Michał Okrasa – ABK UMED – chief ATP coordinator on behalf of the Medical University of Łódź



The official opening of ATP 2026, attended by representatives of the University of Medical Sciences in Łódź, the Łódź University of Technology and Łódź City Council

The 21st Academic Job Fair has once again proved that it is an event of exceptional importance for students, graduates and employers. It is not only a venue for meetings and recruitment, but also proof of just how much can be achieved through cooperation, commitment and many months of work by numerous people.

The next edition of the Academic Job Fair will take place on 22 April 2027. Who will we meet there? Which companies will sign up? Who will be the sponsor? These are questions we will find the answers to at the turn of 2026 and 2027. One thing is certain: Rossmann will be there

– the winner of this year’s competition for the best exhibition stand.

We’d like to invite everyone to mark this date in their diaries now and, of course, to visit ATP 2027!



Prof. Adam Durczyński, Vice-Chancellor for Student Affairs



Alicja Rasmus – BK PŁ, Michał Okrasa – ABK UMED





European Research Council

Funding groundbreaking research: ERC grants as the foundation of scientific excellence

In Modern medical science knows no boundaries. This is precisely why the participation of researchers in prestigious programmes such as Horizon Europe, EIT Health initiatives and European Research Council (ERC) grants has become the cornerstone of a modern university's development. It is within these frameworks that groundbreaking solutions to civilisation's greatest challenges are forged: from digital transformation to the fight against chronic diseases. Building an international presence is, however, a multi-faceted process. It requires participation in training courses and conferences, building networks, joining project consortia, as well as co-authoring proposals and implementing planned activities.



Advanced Grant: A unique opportunity for leaders

The upcoming ERC call represents the best opportunity to reach the highest level of European research. On **28 May 2026**, the European Research Council officially opened the call for proposals for the prestigious **Advanced Grant** scheme.

For the scientific community, this is an excellent time to familiarise themselves with the funding mechanisms that have defined the EU's research elite for years. These grants are not merely a financial instrument, but a confirmation of the highest quality of research conducted and the courage to chart new directions in science.

The 'High Risk – High Gain' philosophy

ERC grants are regarded as the most prestigious funding instruments for basic research in Europe. Their key distinguishing feature is the departure from top-down thematic priorities. In the evaluation process, the only factor that counts is scientific excellence, both of the project itself and of the *Principal Investigator*.

ERC projects are based on the *'High Risk – High Gain'* paradigm. This means that funding is awarded to ambitious concepts whose implementation involves high scientific risk but which, if successful, promise to have a groundbreaking impact on a given field of knowledge or to open up new areas of research. Furthermore, there are no top-down thematic priorities in ERC calls for proposals. It is the researcher who identifies the direction they consider key to the development of their discipline – this is an opportunity to find answers to questions that have hitherto been regarded as too difficult or too bold.

Types of competitions: from PhD to scientific maturity

The structure of ERC competitions reflects the successive stages of a research career, enabling progression from independent research to the establishment of interdisciplinary centres of excellence:

- **ERC Starting Grant (StG):** aimed at researchers between 2 and 7 years post-PhD. A grant of **up to €1.5 million** (over 5 years) supports the establishment of a first, independent research team;
- **ERC Consolidator Grant (CoG):** aimed at researchers between 7 and 12 years after completing their PhD who are consolidating their own research group. Funding amounts **to up to €2 million**;
- **ERC Advanced Grant (AdG):** a call for proposals opening in May, dedicated to recognised leaders with an outstanding track record over the last 10 years. The maximum amount is **2.5 million EUR**;
- **ERC Synergy Grant (SyG):** for groups of 2–4 principal investigators tackling problems requiring a combination of different expertise. **The budget is up to €10 million.**

It is worth noting that in the StG, CoG and AdG calls, it is possible to apply for an additional €1 million to cover the costs of purchasing equipment, infrastructure or relocating a researcher to Europe. Furthermore, ERC grant holders may apply for a **Proof of Concept** – short-term lump-sum funding (**€150,000**) to verify the innovative or market potential of the results obtained under the main project.

In recent weeks, the ERC has announced changes to **the ERC Work Programme 2027** concerning new eligibility windows for the Starting Grant and Consolidator Grant calls, new restrictions on submission, and stricter rules on re-application. All of these will be announced alongside the final version of the Work Programme in late June or early July this year.

New scheme: ERC Plus

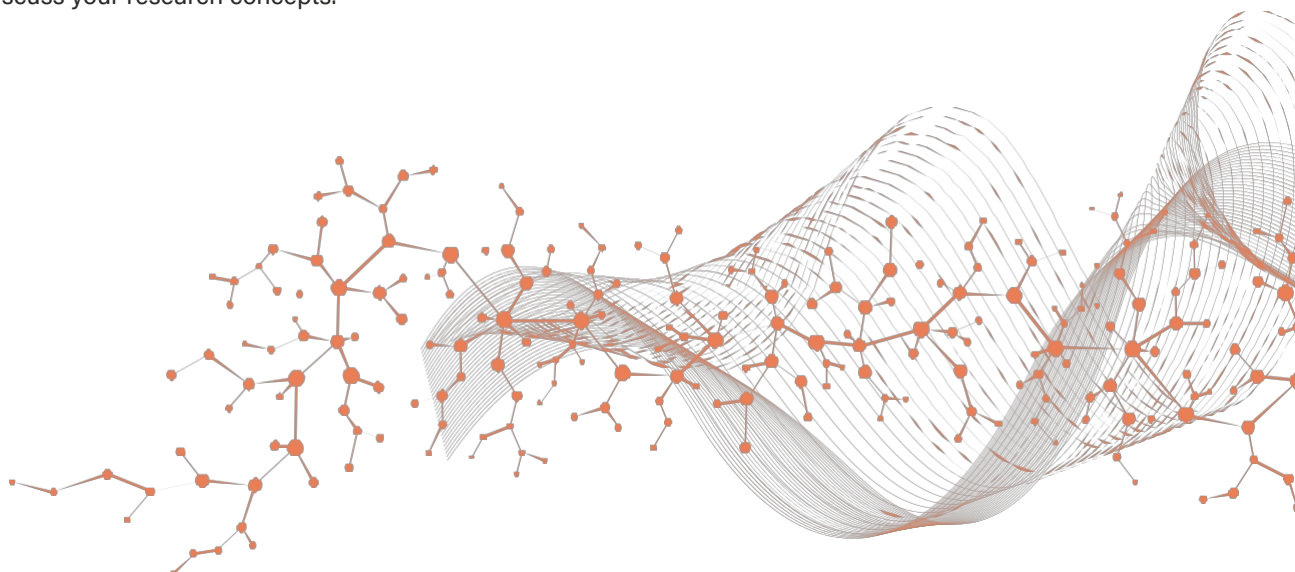
A significant new development in the European Research Council's portfolio is the **ERC Plus** scheme, introduced in the 2026 Work Programme. This programme is aimed at outstanding researchers at any stage of their career and offers a budget **of up to €7 million** for projects lasting between 4 and 7 years. ERC Plus is intended for research of exceptional complexity that cannot be funded through the traditional StG or AdG routes. Candidates are required to commit a significant amount of time to the project (a minimum of 30 per cent of their working time). The call for proposals under this scheme is scheduled for early June, with a deadline of **2 September 2026**.

The path to the ERC and strategic support at UMED

The path to an ERC grant does not begin on the day the call for proposals is announced. Securing funding is the culmination of a strategically built research career: from participating in smaller national grants, through taking on the role of task leader in Horizon Europe projects, to building an international network of contacts. Every participation in a consortium, every publication in a high-impact journal and every experience in team management are crucial stages that enable researchers to develop their own distinct research agenda – essential for convincing the ERC expert panel to fund an innovative idea.

UMED researchers considering applying for ERC calls in the coming years can count on professional support from **the International Projects Department**, including assistance with interpreting the call guidelines, preparing the administrative section and drawing up the project budget.

The deadline for submitting applications for the ERC Advanced Grant 2026 is 27 August. We encourage experienced researchers to take up this challenge and contact our experts to discuss your research concepts.





ERC Starting Grant (StG)

Adresowany do badaczy od 2 do 7 lat po doktoracie. Grant do 1,5 mln EUR (na 5 lat) wspiera budowę pierwszego, niezależnego zespołu.



2–7 lat
po doktoracie



do 1,5 mln EUR
(na 5 lat)



ERC Consolidator Grant (CoG)

Skierowany do naukowców od 7 do 12 lat po doktoracie, którzy konsolidują własną grupę badawczą.



7–12 lat
po doktoracie



do 2 mln EUR



ERC Advanced Grant (AdG)

Konkurs otwierany w maju, dedykowany uznanym liderom o wybitnym dorobku z ostatnich 10 lat.



uznani liderzy
(ostatnie 10 lat)



do 2,5 mln EUR



ERC Synergy Grant (SyG)

Dla grup 2–4 głównych badaczy rozwiązujących problemy wymagające połączenia różnych kompetencji.



2–4 głównych
badaczy



do 10 mln EUR



ERC Proof of Concept (PoC)

Dodatkowe finansowanie dla laureatów grantów ERC, wspierające komercjalizację wyników badań i ich transfer na rynek. Grant do 150 tys. EUR pomaga rozwijać prototypy, walidację technologii, analizę rynku, IP oraz przygotowanie do współpracy z biznesem lub startupem.



dla laureatów
grantów ERC



do 150 tys. EUR



ERC Plus

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Internationalisation in practice

U The Medical University of Łódź is developing cooperation within the European EduCare 5.0 alliance, which brings together medical universities

and health institutions from nine European countries. The initiative focuses on modern education, internationalisation and the use of innovative technologies in education and clinical practice.

International collaboration in health sciences. The Medical University of Łódź as part of the EduCare 5.0 alliance

Ten European universities from nine countries are working closely together within the EduCare 5.0 network to improve the quality of education in the healthcare sector. As one of the project partners, the Medical University of Łódź is involved in integrating educational activities with clinical and research practice. A recent meeting of alliance representatives in Lisbon provided an opportunity to exchange experiences and discuss modern teaching technologies being implemented at partner universities.

EduCare 5.0: a shared space for innovation in health sciences

The EduCare 5.0 Alliance of European Universities is an initiative bringing together ten universities from nine European countries, creating a collaborative network focused on developing modern competences for the health sector. The alliance is coordinated by Bielefeld University of Applied Sciences, and our university is one of the project partners.

Activities carried out within the consortium focus on academic mobility, the development of future-oriented competences, the internationalisation of teaching, and strengthening the institutional capacity of partner universities. Another key element of the initiative is the exchange of experiences between the academic, clinical and administrative communities. EduCare 5.0 integrates research, education and innovation in the field of health sciences, responding to contemporary social and demographic challenges. The project is based on broad academic collaboration, interdisciplinarity and a strong link between educational activities and clinical and research practice, including in relation to the Sustainable Development Goals (SDGs).

Evidence of the project's rapid development was provided by the latest meeting of partner institutions, which took place on 20–23 April this year at Egas Moniz University in Lisbon.



April 2026,
meeting
at Egas Moniz
University in Lisbon

Egas Moniz: Patient-centred practice and the One Health philosophy

The host institution for the April meeting, Egas Moniz University, is distinguished by its unique, highly practical approach to education – focused on the patient and real-world health issues – whilst maintaining a strong research component and fostering critical thinking. Furthermore, the university is progressively implementing the *One Health* concept. This is reflected in its range of programmes, which combine, amongst other disciplines, biomedical sciences, pharmacy, dentistry, nursing, physiotherapy, dietetics, psychology, forensic science and veterinary medicine.

Modern forms of education play a particular role in this context, such as Medical Simulation Centres, 'living labs' based on a *person-centred practice* approach, and the development of competences through the Competence Development Passport. The range of courses is complemented by degree programmes and modules taught in English, Portuguese and French, integrated master's programmes, and postgraduate courses featuring renowned international experts.

EduCare 5.0: **From learning to co-creation**

A key element of EduCare 5.0 is a two-year action plan based on bottom-up collaboration across four levels:

Level 1:

Alliance Academies – open, recurring online workshops open to the entire academic community.

Level 2:

BIPs & Bootcamps (BIP stands for Blended Intensive Programme under the Erasmus+ programme) – a programme designed for students and staff. This year's BIP offering includes: a July course on Interprofessional Simulation bringing together medical simulation centres within EduCare 5.0; a September course on Research Management focusing on project development within large consortia; and the Dual Use in Medicine programme, which will take place in July at our university.

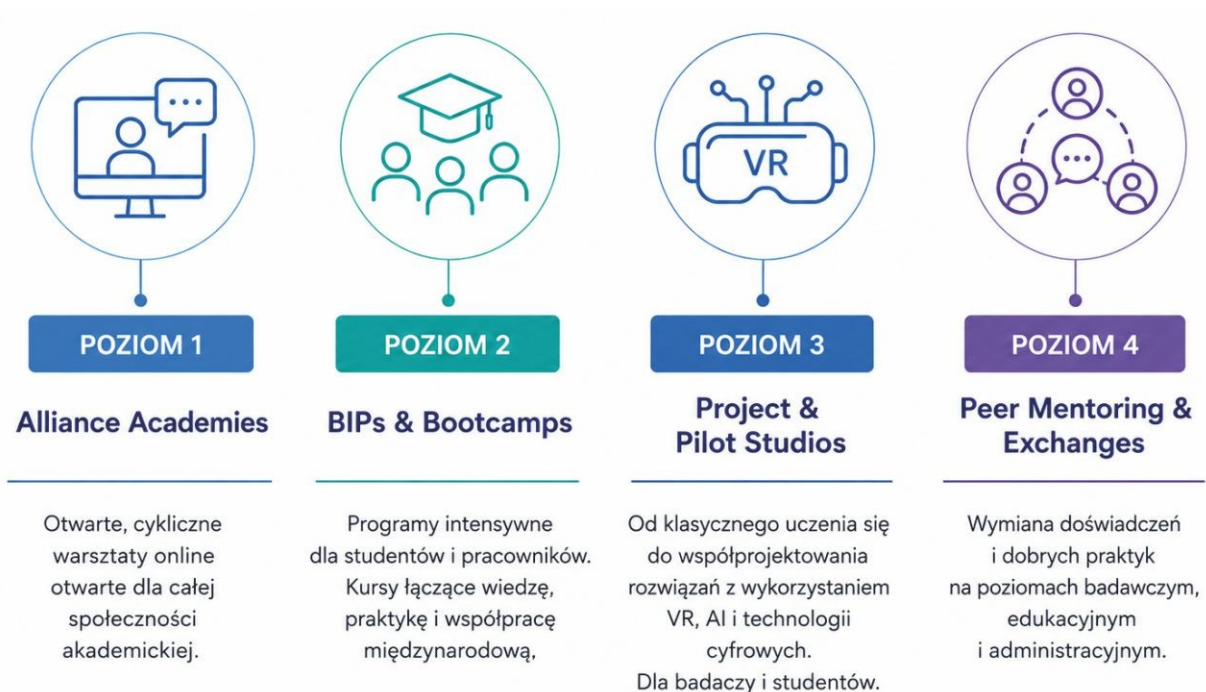
Level 3:

Project & Pilot Studios – enables a transition from traditional learning to the co-design of solutions, utilising VR, AI and digital technologies. Both researchers and students will take part in this programme.

Level 4:

Peer Mentoring & Exchanges – a programme in which each university can express its needs, share best practice and build links at various levels: research, education and administration (the first planned activities include library collaboration, mentoring in HR Excellence, and a course on intercultural communication).

EduCare 5.0: **From learning to co-creation**



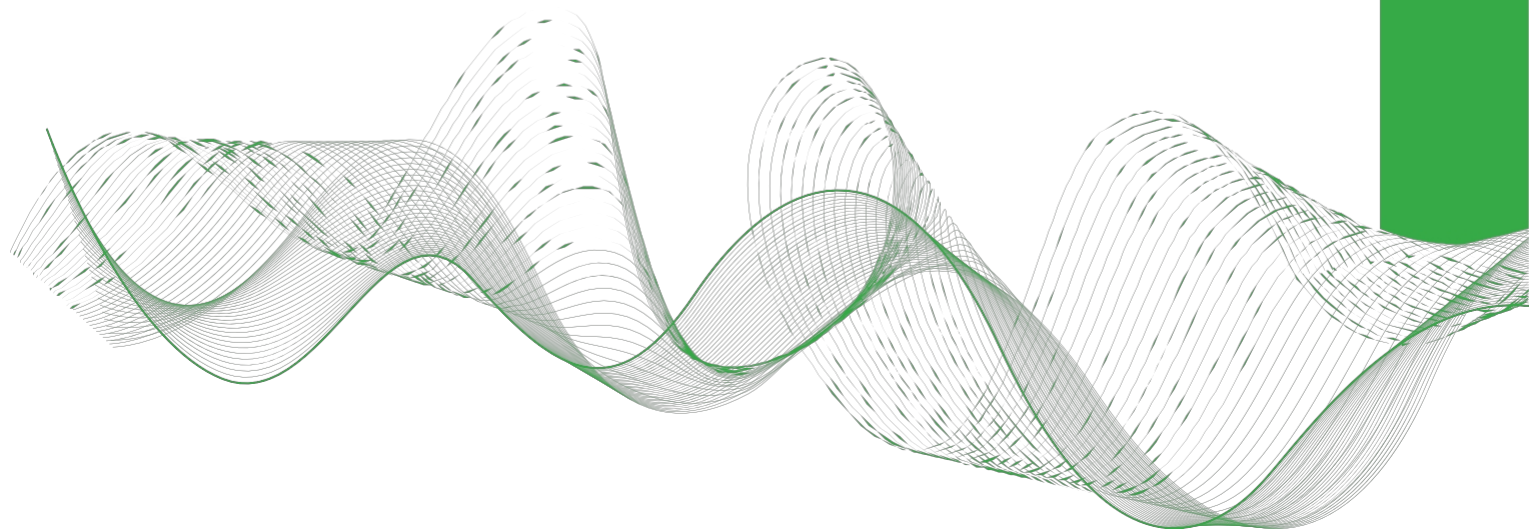
A coherent portfolio of projects – three initiatives, one direction

The Medical University of Łódź's involvement in the development of the EduCare 5.0 alliance has, in recent months, resulted in the preparation of three complementary initiatives supporting the university's development in the areas of innovation, education and international cooperation.

- **THRIVE (EIT HEI Initiative)**
– a project aimed at developing an environment that supports academic entrepreneurship and the implementation of innovation in the health sector.
- **EduCare 5.0 ADVANCE (Erasmus+ – European Universities Initiative)**
– an initiative focused on further developing cooperation between partner universities and strengthening the European dimension of education.
- **BIO-PHARMA NET (NAWA – Strategic Partnerships)**
– a project supporting the development of international scientific links in the fields of biotechnology, pharmacy and biomedical sciences.

Focus: Global presence and development

The development of initiatives within the EduCare 5.0 alliance and the parallel implementation of complementary projects – funded from both national and European sources – form part of the long-term internationalisation strategy of the Medical University of Łódź. These activities enable us to steadily strengthen our university's position on the international stage and to effectively develop cooperation with academic and institutional partners across Europe. In this way, the Medical University of Łódź is consistently consolidating its role as an active participant and leader in the European arena of education, research and innovation in the field of health.



, the spring education fair

– our university
present at the most important
education fairs
in Poland





Ewa Nowak,
Promotion Office

March was an exceptionally busy month for our university, but above all an extremely fruitful one in terms of promotional and recruitment activities.

Over the course of a single month, we took part in a series of education fairs across Poland – ranging from nationwide and international events to regional gatherings, which are crucial for building relationships with prospective students.

Our presence at these fairs provided an opportunity not only to present our academic programmes, but also to engage in direct conversations with young people, understand their expectations and demonstrate that studying medicine is a choice that allows one to have a real impact on other people's lives, offers professional development and ensures a stable future.

► **FutureUP Fest – Łódź bursting with energy**

We kicked off our March series of events by taking part in FutureUP Fest – the first edition of this modern educational event, which took place at the EXPO Hall in Łódź. The fair brought together

as many as 144 exhibitors and an impressive number of around 24,000 visitors, confirming the huge demand among young people for direct contact with representatives of the world of science and education.

Our university was represented as part of the joint 'Łódź Akademyka' stand, which allowed us to showcase the strength of collaboration within Łódź's academic community and the wide range of study opportunities available in the city.

The stand attracted a great deal of interest, and visitors were keen to take part in the workshops and demonstrations organised by the Student Research Clubs: the Medical Biotechnology Club, the Nursing Students' Club



at the Medical University of Łódź, the Neurorehabilitation Student Research Club and the 'Move it!' Student Research Club. School pupils had the opportunity not only to gain practical experience but also to talk to students, ask about medical degree programmes, career prospects and everyday life at university.

It was an excellent opportunity to demonstrate that modern medical education combines knowledge, practice and social engagement, whilst also inspiring students to choose a career path based on passion and a real impact on the lives of others.

► **Prospects 2026**
– the educational heart of Warsaw

Another key event on the March calendar was **the 43rd International Education Fair 'Perspectives 2026' in Warsaw** – one of the most recognisable and prestigious educational events in the country. The fair took place at the EXPO XXI centre and, as usual, attracted thousands of school pupils, A-level students, teachers and parents.

Our university's participation in this event provided an excellent opportunity to showcase our modern approach to medical education, our high teaching standards and the wide-ranging career prospects available to our graduates. Discussions held during the fair confirmed the growing interest in healthcare-related courses.

► **Katowice**
– the power of collaboration under the 'Academic Łódź' brand

Another important stop was the 28th National Education Fair 2026 in Katowice, held at the legendary Spodek arena. The event was attended by over 60 universities, schools and educational institutions from across Poland. We were present there as part of the joint '**Łódź Akademicka**' initiative, promoting Łódź as a strong academic centre and an attractive place to study.

The joint presence of Łódź's higher education institutions was an excellent example of effective promotional cooperation and of building a strong brand for the city as an important academic centre. The stand attracted a great deal of interest, and prospective students appreciated the opportunity to explore Łódź's wide range of educational opportunities in one place.

► **Wieluń**
– close to the region's young talent

The Wieluń Higher and Post-secondary Education Fair was also of particular significance, as it enabled us to reach out directly to young people from the region and answer their questions about admissions, degree programmes and academic life.

Events of this kind demonstrate how important it is for universities to have a presence outside the largest urban centres as well.



For many students, this was their first opportunity to speak face-to-face with university representatives and obtain specific information about further education.

► **Radom**
– ambitious applicants and keen interest in medical studies

We concluded our March series of events by taking part in the **21st National Education Fair in Radom**. The meeting with young people from Mazovia once again confirmed that medical courses are currently among the most highly regarded and promising educational choices.

Students asked not only about the admissions process, but also about work placements, modern teaching facilities, academic development and career opportunities after graduation. This is proof that prospective students are making increasingly informed and responsible decisions.

► **March: Building the Future**

Participating in so many events within a single month is not only an organisational success for our university, but above all an investment in the future. Direct contact with prospective students, the opportunity to talk to them, showcase the values of our academic community and build the university's brand recognition are of immense importance in the admissions process.

We look forward with optimism to the coming months and further meetings with prospective students – confident that many of them will soon join our academic community.



biegniemy z pomocą

ANNIVERSARY EDITION OF THE CHARITY

UMEDU CHARITY RUN 'We're Running to Help'



On 16 May 2026, the community of the Medical University of Łódź gathered for the tenth time at the starting line of a unique event – the 10th UMED Charity Run. For a decade now, this initiative has been combining physical activity with tangible help for those in need, standing as one of the most recognisable examples of the university's social engagement.



The start of the 10th UMED Charity Run

This year's edition, as in previous years, took place in the green spaces adjacent to the CKD campus – in 3 May Park and Baden-Powell Park. Over 500 participants – students, staff, alumni and friends of the university – lined up at the start to tackle the route, which was over 5 kilometres and 100 metres long.

The event was presided over by His Magnificence the Rector, Prof. Janusz Piekarski, and attended by university officials, including Prof. Adam Durczyński – Vice-Rector for Student Affairs – and Prof. Waldemar Machała – Vice-Rector for Military Health Services. Their presence underlines the significance of this initiative in both academic and social terms.

From the very beginning, the idea behind the run has been to combine a passion for sport with charitable work. As the organisers emphasise, the event not only promotes a healthy lifestyle but also brings together the academic and local communities, giving participants a sense of having a real impact on improving patients' quality of life.

"We Run to Help" has been reflected in the impressive result of the fundraising campaign, achieved solely through donations made by the runners. Participants in the event raised as much as **74,143.00 zł**, which will be used to support patients at the Department of Dermatology and Venereology at the Medical University of Łódź.

This anniversary edition is an excellent opportunity to recall how it all began. Since 2011, on the initiative of the then President of AZS UMED, Wojciech Kuncman, with the support and active involvement of Prof. Radziśław Kordek, the Medical University of Łódź has regularly fielded a team in the 10-kilometre run and the 'Dbam o Zdrowie' marathon. These joint events, which brought the academic community together and showcased its sporting spirit, provided a natural impetus to create an event of their own. Over time, this idea took shape as what we now know as the UMED Charity Run – an initiative combining physical activity with tangible help for others.

The first run took place in 2017 and raised 3,142.50 zł, whilst in subsequent years the amounts raised have steadily increased – from a dozen or so, through several tens of thousands of zł, right up to the record total achieved in 2026.

Over the years, the funds have been channelled to numerous organisations and clinics, including the University Paediatric Centre, the Clinics of Paediatrics, Oncology and Haematology, Internal Medicine and Transplant Nephrology, Geriatric Psychiatry and Psychotic Disorders, and the Clinic of Rheumatology. This consistency in action demonstrates that the UMED Charity Run has become an integral part of the university's mission.

Although every participant in the run contributes to the collective success, there was no shortage of sporting competition either.



Cheering on the runners during the 10th UMED Charity Run



Winners of the 10th UMED Charity Run:

Male students / Female students

1. Stanisław Stepka (17:58) / Paulina Jancylik (19:27)
2. Jakub Tambor (18:11) / Wiktoria Rabeiga (22:11)
3. Wiktor Kiendys (19:02) / Barbara Kosowska (22:58)

Staff

1. Michał Właźlak (20:21) / Caroline Green (21:52)
2. Michał Maliszewski (21:40) / Oliwia Gawlik-Kotelnicka (23:28)
3. Szymon Piaszczyński (22:13) / Paulina Łagodzińska (24:17)

Graduates

1. Jarosław Jancylik (19:04) / Eliza Miaśkiewicz (24:29)
2. Aleksander Gras-Ozimek (19:15) / Magdalena Pawlak (24:41)
3. Mikołaj Glita (20:03) / Dominika Gosztyła (25:34)

Open

1. Norbert Ogiński (18:15) / Magdalena Gliszczyńska (28:39)
2. Mariusz Kotelnicki (20:07) / Katarzyna Giedrojc (30:53)
3. Patryk Śniarowski (24:46) / Klaudia Szkup (33:35)

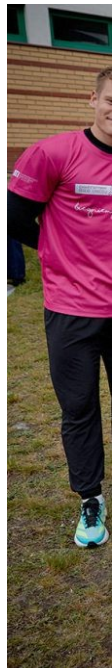
The winners received commemorative certificates and bags filled with a generous selection of attractive prizes, sponsored by the event's partners.

The event was organised by the Foundation for the Medical University of Łódź in collaboration with the Medical University of Łódź and the AZS UM University Club in Łódź. This joint initiative, in which

the university's administrative staff were also actively involved, demonstrates just how much can be achieved through cooperation between different groups – from students and academic staff, through the administration, to partners and sponsors.

The UMED Charity Run is much more than a sporting event – it is an expression of the strength, compassion and social responsibility of the academic community, which actively responds to the real needs of others. The tenth anniversary edition not only reaffirmed the enormous potential of the idea of 'running to help', but also demonstrated its dynamic development and growing power to unite people around a common goal.





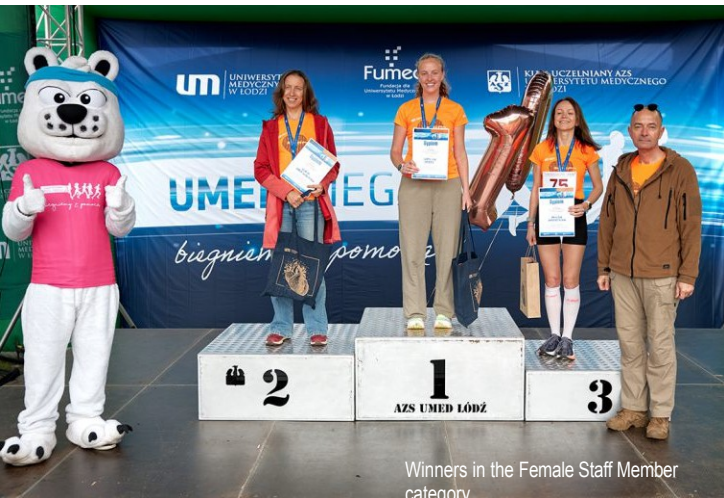
First runner to cross the finish line
10th UMED Charity Run





AZS at the 10th UMED Charity Run

- 1 - Prof. Monika Burzyńska and Katarzyna Kociszewska
- 2 - Winners in the Student category
- 3 - Winners in the Graduate category
- 4 - Female winners in the Graduate category
- 5 - Female winners in the Female Student category
- 6 - Prof. Anna Woźniacka, Prof. Agnieszka Żebrowska, Joanna Milczarek, MA, Prof. Janusz Piekarski



Winners in the Female Staff Member category



Winners in the Staff Member category



Participants in the 10th UMED Charity Run





Prof. Agnieszka Żebrowska, Prof. Jarosław Dróżdż, Prof. Anna Woźniacka



Winner Dr Michał Wlazlak, Prof. Adam Durczyński



Prof. Janusz Piekarski – Rector of the Medical University, Dr Monika Domarecka – Director of the Medical University's Clinical Research Centre, Paweł Zawieja, MA – Chancellor of the Medical University



A volunteer presents a medal to a runner



UMED Charity Run



Student Society for Emergency and Disaster Medicine



Start of the 10th UMED Charity Run



Warm-up for the 10th UMED Charity Run

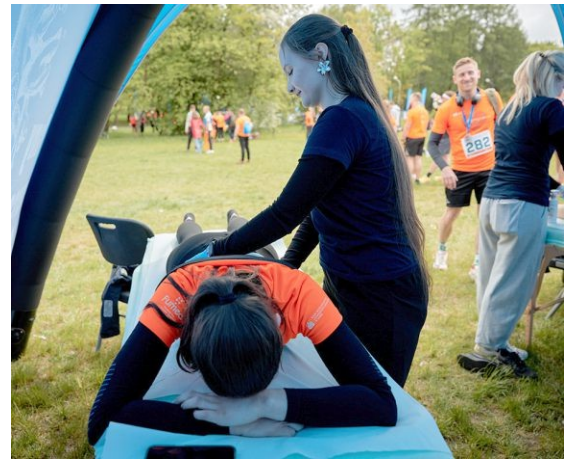


Cotton candy for race participants



Volunteers and organisers of the 10th UMED Charity Run

Partners:



Warm-up for participants in the 10th UMED Charity Run



We encourage you to visit: <https://umedbiega.umed.pl/>







6th UMED Charity Run



7th UMED Charity Run



8th UMED Charity Run



9th UMED Charity Run



10th UMED Charity Run



10th UMED Charity Run



10th UMED Charity Run



Wojciech Ciesielski - founder of the UMED Run

biegniemy z pomocą

The Population Health Observatory – a new analytical centre for public health



The Department of Epidemiology and Biostatistics at the Medical University of Łódź has established the Public Health Observatory (PHO) – a new research and analytical initiative aimed at supporting the healthcare system by providing reliable analyses based on scientific data.

The Observatory's main task will be the systematic collection, analysis and interpretation of data on the health status of the population, monitoring epidemiological trends and identifying key public health threats.

Awards were presented named after Prof. M. Stefanowski

On 12 February, the Prof. M. Stefanowski Awards were presented for the best habilitation and doctoral theses in the field of clinical surgical sciences.

The Award Committee, chaired by Prof. Adam Durczyński, Vice-Rector for Student Affairs, honoured:



Dr Damian Mikulski wins the main prize in the 27th edition of the StatSoft Polska competition



On 10 February this year, a meeting was held in the Rector's office to honour the winner of the main prize in the 27th edition of the StatSoft Polska competition for the best doctoral thesis prepared using *Statistica* software.

The meeting was attended by: the Rector of the Medical University of Łódź, Prof. Janusz Piekarski; representatives of StatSoft Polska; the supervisor of the winning thesis, Prof. Wojciech Fendler; the Dean of the Faculty of Medicine, Prof. Jacek Roźniecki; and the award winner, Dr Damian Mikulski.

Dr Mikulski works as a research assistant at the Department of Biostatistics and Translational Medicine at the Medical University of Łódź, and the award-winning thesis is entitled '*The role of circulating miRNAs in predicting treatment outcomes, complications and toxicity in autologous haematopoietic stem cell transplantation*'.

- Dr Karol Wiśniewski, MD, PhD
— for the best habilitation thesis
- Dr Łukasz Łaziński, MD
— for the best doctoral thesis.

The awards were presented to the winners of this year's event by Ms Irena Szymańska, MA, the award administrator, accompanied by the Rector, Prof. Janusz Piekarski.

Students and graduates of the Medical University of Łódź among the top performers in the LDEK 2026

Students and graduates of the medical and dental programme at the Medical University of Łódź achieved very high results during the spring session of the 2026 Medical and Dental Final Examination, confirming the high standard of education provided by the university.

In the ranking covering students from all medical universities in Poland, students from the Medical University of Łódź came second, achieving an average score of 153.86 points.

In the overall classification, which includes both students and graduates sitting the exam, our university came fourth in the country, with an average score of 153.34 points.

These results are the fruit of the students' systematic work and the commitment and professionalism of the teaching staff at the Medical University of Łódź.



We warmly congratulate all candidates and wish them every success in their future careers.

Career advisers from Ireland visited the Medical University of Łódź

On 30–31 March 2026, the Medical University of Łódź hosted a delegation of 14 guidance counsellors from secondary schools in Ireland. The aim of the visit was to promote the university as an attractive place to study.

The event was organised in collaboration with the Centre for the Organisation and Support of English-Language Studies and Medical Poland, an international organisation that has been promoting Polish medical universities in foreign markets for over a decade.



Six representatives of the Medical University of Łódź on the 'List of 100 2025' 'Puls Medycyny'

On 4 March, the results of the 23rd edition of the prestigious 'List of 100' ranking, compiled by 'Puls Medycyny', were announced. For years, the ranking has highlighted the individuals who have the greatest influence on the development of Polish medicine and the healthcare system — those who initiate new areas of research, implement systemic solutions and foster collaboration between academia, clinical practice and expert communities.

This year's ranking features six representatives from the Medical University of Łódź, who, through their scientific, clinical and organisational work, are helping to shape the direction of modern medicine.

The list includes:

- 4th place — Prof. Maciej Banach
- 11th place — Prof. Wojciech Fendler
- 24th place — Prof. Wojciech Młynarski
- 72nd place — Prof. Agata Bielecka-Dąbrowa
- 74th place — Prof. Adam Antczak
- 84th place — Prof. Piotr Galecki

In this year's edition, marking the anniversary of of *Puls Medycyny*, the ranking has returned to its original format of a single list comprising both leaders in medicine and the healthcare system.

The inclusion of representatives from the Medical University of Łódź amongst the most influential figures in Polish medicine confirms the university's significant role in the development of scientific research, modern medicine and the shaping of the healthcare system in Poland.

The full list of winners is available at: <https://pulsmedycyny.pl/wydarzenia/lista-stu/>



Meeting of Vice-Rectors for Research at KRAUM Medical Universities



On 10 March 2026, a meeting was held of Vice-Rectors for Research from medical universities affiliated with the Conference of Rectors of Academic Medical Universities (KRAUM). The event was hosted by the Pomeranian Medical University in Szczecin.

The Medical University of Łódź was represented by the Vice-Rector for Research, Prof. Agnieszka Piastowska-Ciesielska. The proceedings concluded with a joint discussion on the proposals put forward by the medical university community to the Ministry of Science and Higher Education and the Science Evaluation Committee.

The event provided an opportunity to exchange experiences and discuss current challenges relating to conducting research at medical universities. Among the topics raised were, amongst others, issues concerning the evaluation of research quality, systems supporting the publication of research findings in prestigious scientific journals, and the impact of changes to journal scoring systems on the functioning of universities.

Participants also discussed opportunities for developing cooperation between medical universities and tools to support the management of research activities, including solutions utilising artificial intelligence.

UMED Łódź on the podium in the 13th edition of the Genius Universitatis competition

We are delighted to announce that the team from the Promotion Office of the Medical University of Łódź has secured a place on the podium in the 13th edition of the prestigious Genius Universitatis competition, organised by Perspektywy.

Genius Universitatis is one of the most important competitions recognising the most creative and effective marketing initiatives by universities in Poland. The universities competed in nine categories, presenting projects in the fields of communication, promotion and brand building.

In this year's edition, the #KierunekNauka project took second place in the Branded Content category, ranking among the highest-rated of the 20 projects submitted.

BRANDED CONTENT

- 1st place: SWPS University
- 2nd place (joint): Medical University of Łódź & Warsaw School of Economics
- 3rd place (joint): University of Agriculture in Kraków & University of Silesia in Katowice

A total of 132 projects from 38 universities were submitted to this year's edition of the competition. The entries were judged by a 12-member panel of experts chaired by Prof. Artur Krajewski, PhD, from the Academy



Launch of the NAWA Project “Lodzkie for International Researchers (Lodzkie4Re)”

On 27 March 2026, the NAWA project “Lodzkie for International Researchers (Lodzkie4Re)” was officially launched on 27 March 2026. The project aims to strengthen the internationalisation potential of Łódź's academic community and to raise standards in the support provided to foreign researchers and PhD students. The project is coordinated by the University of Łódź, which is implementing it in collaboration with the Medical University of Łódź and the Łódź University of Technology.

For the Medical University of Łódź, participation in the Lodzkie4Re project is a key element of its consistently implemented strategy for the internationalisation of research and education.

The joint efforts of Łódź's three largest higher education institutions, united within the Łódź Academic Partnership, demonstrate that cross-institutional collaboration is now a key prerequisite for successfully competing for the best researchers on the international stage.

The project focuses on creating a welcoming and cohesive support ecosystem for non-Polish-speaking researchers and PhD students — from their first contact with the university, through formalities, to their integration into the

UMED receives an honourable mention in the PRom 2026 competition for the promotion of English-language studies

academic community and the local community.

On 23 March 2026, during the gala ceremony of the 38th Conference of the Association for Public Relations and Promotion of Polish Universities, the results of this year's competition were announced. In the 'international promotion' category, the Medical University in Łódź received a commendation for a project aimed at applicants for English-language degree programmes.

The project 'Embrace the world of opportunities. Learn, grow, and become a medical professional with MUL!' was developed by the Centre for the Organisation and Support for English-Language Studies in response to changing migration and educational trends.

Its main objectives are:

- to strengthen the recognition of the UMED brand in key European and OECD markets,
- building the university's image as a modern, open and welcoming institution for students from all over the world.

The PRom Association Award is one of the most prestigious accolades in the field of communication and promotion of Polish higher education.

The National Recovery Plan is driving the development of medical education – a visit by Minister Katarzyna Kacperczyk

On 19 March, a meeting was held at the CKD campus between university and teaching hospital authorities and representatives of the Ministry of Health. The following took part in the discussions:

Katarzyna Kacperczyk, Under-Secretary of State at the Ministry of Health, Ilona Hibner, Director of the Investment Assessment Department, and MP Adrian Witczak. The meeting began with a press briefing on the largest ongoing investment projects



at the university and its teaching hospitals, funded under the National Recovery Plan (KPO). The delegation then visited, amongst other places, the Teaching Support Centre (U1), the new Hospital Accident and Emergency Department and the Radiotherapy Centre.

The Medical University of Łódź is currently implementing one of the largest investment programmes in the field of medical education and clinical infrastructure. Thanks to support from the Ministry of Health, the university is implementing the PRU UMED project – ‘Improvement of Study Conditions’ – which involves the construction, modernisation and refurbishment of key teaching and clinical spaces.

The aim of the project is to increase the number of students on medical courses, whilst providing them with modern learning conditions. It involves investments in both infrastructure and the development of digital resources and medical simulation facilities.

Scholarships from the Marshal of the Łódź Voivodeship for students at the Medical University of Łódź



For the twentieth time, the Marshal of the Łódź Voivodeship has honoured the most talented students and pupils from our region. This year, scholarships for outstanding academic achievements will be awarded to 43 young talents from across the Łódź Voivodeship, including as many as 12 students from the Medical University of Łódź.

The competition assessed not only academic achievements but also social engagement and involvement in extracurricular activities.

The awards were granted in three financial categories:

Winners of the 1st, 2nd and 3rd prizes:

1. Krzysztof Badura, Medicine, 6th year, 1st-class award
2. Julia Jaromirska, Medicine, 6th year, 1st-class award
3. Zuzanna Granek, Medicine, 6th year, 1st-class award
4. Martyna Borkowska, Medicine, 6th year, 1st-class award
5. Kacper Pawlak, Medicine, 6th year, 1st-class award
6. Wiktoria Lisińska, Medicine, 6th year, 2nd-class award
7. Kamil Saramowicz, Medicine, 6th year, 2nd-class award
8. Alicja Witkowska, Medicine, 5th year, 2nd-class award
9. Wojciech Jankowski, Medicine, 5th year, 2nd-class award
10. Marta Marzena Pośnik, Medicine, 6th year, 2nd-class award
11. Dominik Przychodniak, Medicine, 5th year, 2nd-class award
12. Grzegorz Mirocha, Medicine, 6th year, 3rd-class award

As many as nine of the award winners are students following an Individual Study Programme.

We warmly congratulate all the award winners and wish our students every success in the future.

Recipients of the Minister of Health's Scholarship 2025/2026

The Minister of Health has announced the list of outstanding students who have been awarded a one-off scholarship in recognition of their academic achievements. Among the recipients are students from our university, whom we warmly congratulate and wish every success in the future.

Five students have been awarded the scholarship:



Wiktoria Lisińska

– a sixth-year medical student. As part of the Cardiology and Nephrology Student Research Group, she prepared research papers on internal medicine, and as part of the Student Research Group at the First Department of Gynaecology and Obstetrics at the Medical University of Łódź, she and her team carried out a study on the level of knowledge

among Poles regarding in vitro fertilisation, which received awards at conferences. Additionally, she is a co-author of a publication in dermatology. She gained research experience during visits to Johannes Kepler University in Linz (Austria) and the University of Heraklion in Heraklion (Greece), developing her research skills and an international perspective on medicine. In her spare time, she is passionate about travelling, enjoys going for walks and reading books.



Krzysztof Badura

– a sixth-year medical student. He is a student and researcher currently affiliated with the Second Department of Cardiology at the Medical University of Łódź. He conducts research in the field of clinical cardiology, with a particular

focus on acute heart failure, cardio-renal interactions and issues related to intensive cardiac care in patients with congenital and valvular heart defects. He is the author and co-author of scientific publications and numerous conference presentations at national and international scope, actively contributing to the development of research into modern diagnostics and intensive care for cardiovascular diseases. He is undertaking a programme as part of the Individual Study Programme.



Kamil Saramowicz

– a sixth-year medical student. He is following a programme under the Individual Study Programme (ITS), focusing on research in the field of molecular neuroimmunology of carcinogenesis, neurodegeneration and demyelination. He is the principal investigator on three

research grants, including a grant from the Ministry of Science and Higher Education. Co-author of 10 scientific articles with a combined Impact Factor (IF) of 46.4 and a total Ministry of Science and Higher Education (MEiN) score of 1,180.



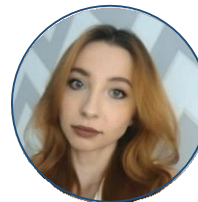
Grzegorz Mirocha –

a sixth-year medical student.

His current work focuses on chronic pain syndromes in rheumatology, a field in which

he plans to undertake his PhD. He is particularly interested in statistical modelling, both in a nosological context and in optimising models of response to treatment. In his spare time, he is a fan of classical literature and philosophy.

Chair of the Rheumatology and Internal Medicine Student Research Group. Affiliated with the Department of Biostatistics and Translational Medicine and the Rheumatology Clinic, where he is following an Individual Study Programme. Five-time recipient of the Rector's First-Class Scholarship, recipient of scholarships from the Marshal of the Łódź Voivodeship and the Minister of Health, and multiple medallist at the Polish Academic Athletics Championships (university category).



Marta Pośnik

– a sixth-year medical student. A two-time recipient of scholarships from the Minister of Health (2024/25, 2025/26) and the Marshal of the Łódź Voivodeship

(2025/26), and has received the Rector's Scholarship from the Medical University of Łódź on numerous occasions.

She is following an Individual Study Programme at the 3rd Department of Radiology and Diagnostic

. Her research focuses on the anatomical variability of muscular structures, their imaging and clinical significance. She is the author and co-author of numerous publications in prestigious international journals in the fields of anatomy, radiology

and interventional techniques. She divides her free time between her sporting passions (climbing), musical interests (guitar) and exploring literature and the history of cinema.

The Medical University of Łódź plays a part in the sporting excitement of the DOZ Łódź Marathon 2026



From 10 to 12 April 2026, Łódź once again became the centre of sporting excitement, and the Medical University of Łódź actively participated in this exceptional event as a partner of the DOZ Łódź Marathon.

One of the most visible aspects of our university's presence was the physiotherapy support zone, run by UMED students studying Physiotherapy at the Faculty of Health Sciences. It was there that participants could benefit from professional consultations, massages and kinesiotaping. The students supported the runners both before the start and by helping with recovery after the race.

The organiser and coordinator of the activities promoting the Medical University of Łódź and the Physiotherapy programme was Dr Joanna Kapusta, MD, who emphasised the importance of UMED's collaboration with the sporting community; thanks to her, the University's presence was not only visible but also tangibly felt by those taking part in the event.

Three Medical Universities join forces

UMed Łódź, GUMed and WUM are implementing a joint project that is transforming the way nurses are trained in Poland – the E4N.EU – NursingOntos (PORTO) project.

Since 2024, the Centre for Research and Development of the International Classification of Nursing Practice (ICNP®) at the Medical University of Łódź, accredited by the International Council of Nurses (ICN), has been participating in the international E4N.EU – NursingOntos project, carried out in collaboration with European partners, including CIDESI – ESEP (Centro de Investigação em Sistemas de Informação em Enfermagem, Escola Superior de Enfermagem do Porto) in Portugal, is running a project unique in Eastern Europe that brings together three medical universities in Poland: the Medical University of Łódź, the Medical University of Warsaw and the Medical University of Gdańsk.

For the first time, three leading medical universities are implementing a modern, digitally-based educational model in response to the challenges posed by the transformation of the healthcare system.



The Minister of Health visits the CKD campus

On 11 May this year, the Minister of Health, Jolanta Sobierańska-Grenda, visited the Clinical and Teaching Centre of the Medical University of Łódź.

The meeting with representatives of the Ministry, held at MoLecoLab, was attended by, amongst others:

- MP Dariusz Joński
- Małgorzata Niemczyk, Member of Parliament
- The Rector of the University, Prof. Janusz Piekarski
- Vice-Rector for Clinical Affairs, Prof. Adam Antczak
- Director of the Central Clinical Hospital (CSK), Dr Monika Domarecka.

During the visit, the guests toured the new hospital facilities at the CKD, and a press conference was held to summarise the figures relating to funds from the National Reconstruction Plan (KPO) allocated to healthcare investments.



UMED hosts the EU's first RCCS training course on crisis management

The Medical University of Łódź hosted the European Union's first crisis management training course, organised as part of the Resuscitation and Critical Care Simulation (RCCS) programme. This event represents a significant step in the development of modern medical education focused on the preparedness of healthcare systems in crisis situations and disasters.

The training was attended by 20 healthcare professionals who took part in the Fundamental Critical Care Support – Crisis Management (FCCS-CM) course. The programme comprised intensive, practical sessions devoted to responding to emergencies, organising the work of medical teams and managing resources in crisis situations. The training addressed the real needs of frontline medical staff, filling gaps in both theoretical knowledge and practical skills.



The RCCS training in crisis management reaffirms the Medical University of Łódź's position as a leader in innovative medical education and a key partner in international safety initiatives.

Researchers from the Medical University of Łódź among the Top 100 Women in Biotech in Poland



We are proud to announce that representatives of the Medical University of Łódź have been nominated for the prestigious 'TOP 100 Women in Biotech in Poland' list, announced as part of the Perspektywy Women in Tech Summit 2026 – Europe's largest event for women in technology.

Among those honoured were:

- Prof. Ewa Balcerczak – Head of the Department of Laboratory and Molecular Diagnostics at the Medical University of Łódź, the Rector's Representative for Postgraduate Education,

- Dr Karolina Kowalska from the Department of Cell Culture and Genomic Analysis at the Medical University of Poznań,
- Dr Żaneta Kałuzińska-Kołat from the Department of Functional Genomics at the Medical University of Poznań,
- Weronika Kruczkowska, MSc – PhD student at the Department of Functional Genomics,
- Katarzyna Płoszka – a PhD student at the Department of Biostatistics and Translational Medicine, Medical University of Poznań.

The TOP 100 Women in Biotech programme aims to recognise outstanding women working in the field of biotechnology – scientists, leaders, innovators and educators who have a tangible impact on the development of science and the biotech sector in Poland and worldwide. The initiative also promotes female role models in fields traditionally dominated by men and inspires younger generations to pursue careers in science and new technologies in both theoretical knowledge and practical skills.



Hospitals University

Innovative EV-ICD implantation procedure at the Electrocardiology Clinic of the Central Clinical Hospital

In early April, the Electrocardiology Clinic at the Central Clinical Hospital of the Medical University of Łódź joined the group of 10 Polish centres implementing the programme for the implantation of a modern, extravascular cardioverter-defibrillator (EV-ICD; Aurora). This is a breakthrough technology in the field of cardiac electrotherapy, enhancing patient safety by eliminating the need to insert electrodes into the vascular system whilst retaining the ability to treat life-threatening ventricular arrhythmias through high-energy shocks and anti-tachyarrhythmic pacing.

The first EV-ICD implantation procedure at our centre was carried out by Prof. Krzysztof Kaczmarek and Dr Aleksander Strzelecki, with the support of Prof. Maciej Sterliński from the S. Wyszyński Institute of Cardiology in Warsaw and under the supervision of specialists from the Cardiac Surgery Clinic at the Central Clinical Hospital of the Medical University of Łódź. It was also the first procedure of its kind to be performed in the Łódź Voivodeship.

The procedure involves implanting a defibrillation electrode within the anterior mediastinum — directly beneath the sternum — and placing the pulse generator in the lateral part of the chest. This approach enables the effective treatment of life-threatening cardiac arrhythmias whilst minimising the risk of complications associated with traditional transvenous systems.





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