



UNIVERSITY OF ZAGREB
SCHOOL OF MEDICINE

DEVELOPMENT STRATEGY OF RESEARCH, RESEARCH AND INFORMATION INFRASTRUCTURE, TECHNOLOGY TRANSFER AND INTERNATIONAL COLLABORATION 2023 - 2028



**Development Strategy of Research, Research and
Information Infrastructure, Technology Transfer and
International Collaboration 2023 - 2028**

Zagreb, 2023

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VISION AND MISSION

With respect to the strategy of research and technology transfer, the main purpose and mission of the University of Zagreb School of Medicine (hereinafter referred to as the UZSM) is to maintain international competitiveness in research, teaching and clinical activities; to improve measures for increasing research excellence (including the strengthening of human resources and administrative support for research and other professional activities); to extend and improve the cooperation with industry and to enhance academic entrepreneurship.

ANALYSIS OF SCHOOL OF MEDICINE'S RESEARCH POTENTIAL AND ITS POSITION WITHIN RESEARCH AND BUSINESS ENVIRONMENT

University of Zagreb School of Medicine is the leading Croatian (and regional) academic institution in the field of biomedicine and health, as revealed by number of its publications, competitive research grants, successfully completed Ph.D. theses, human resources, and international visibility and competitiveness. Furthermore, the UZSM is the only institution in Croatia which provides postgraduate education for residents in all types of clinical specializations approved in the Republic of Croatia. The UZSM has an extensive long-term collaboration with a number of leading international universities and research institutes, and strongly supports the collaboration with prominent Croatian scientists working abroad. The UZSM is also the only Croatian academic institution which hosts two (out of ten) Centers of Scientific Excellence (see below). Our research productivity is easily recognized by continuously growing research output, i.e. growing number of research publications. From 2018 to 2022, our researchers published 4,376 papers indexed in Scopus (Figure 1). During that 5-year period, each of our researchers on average published 17 papers (most frequently 11), while more than 50 researchers published more than 30 papers each. The publication output of the UZSM continuously represents about 25% of total publication output of the University of Zagreb, and about 10% of total Croatian publication output. Approximately 44% of our publications were published in co-authorship with foreign researchers, which is a clear sign of successful internationalization. Moreover, there is a continuous increase of the UZSM publications in the Web of Science: about 30% of these publications (indexed in WoS SCI-EXP and SSCI) were published in journals with a high impact factor (JCR IF) and belonging to the first quartile (JCR Q1) of a respective research field (Figures 2 and 3). From 2018 to 2022, more than 100 of these papers were published in journals with IF higher than 25. The quality and visibility of the UZSM publications are also demonstrable by the number of independent citations in WoS and Scopus. For example, in 2022 our papers were cited almost 50,000 times in Scopus; the papers published between 2018 and 2022, and indexed in Scopus, already have more than 105,000 citations and H-index 104 (Figure 4). The UZSM support for socially responsible and open science is demonstrated by increasing number of open access publications; about 65% of the UZSM publications for the 2018 - 2022 period were published in an open access format, and in 2022 this number increased to 76% (Figure 5).

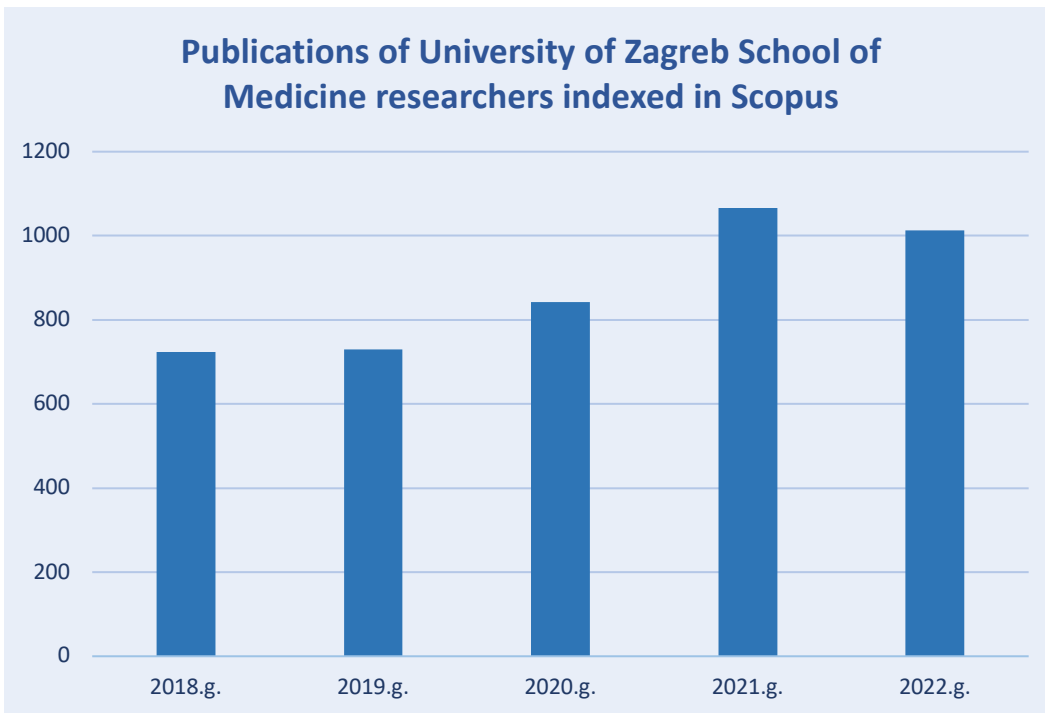


Figure 1. Publications of University of Zagreb School of Medicine researchers indexed in Scopus.

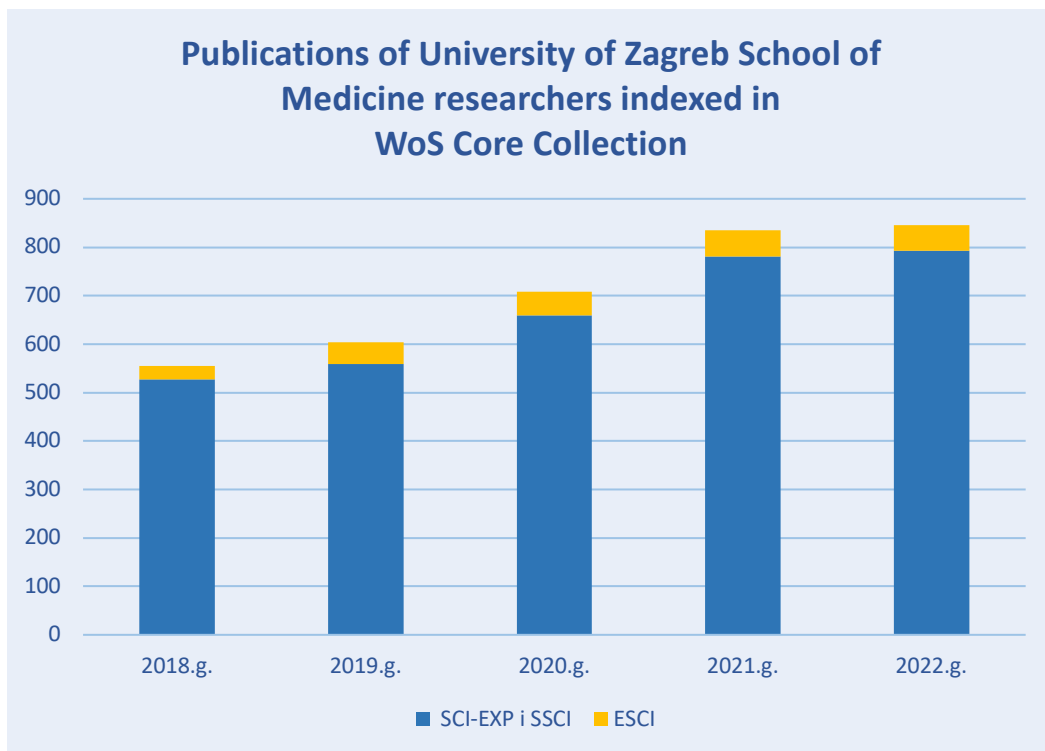


Figure 2. Publications of University of Zagreb School of Medicine researchers indexed in Web of Science Core Collection.

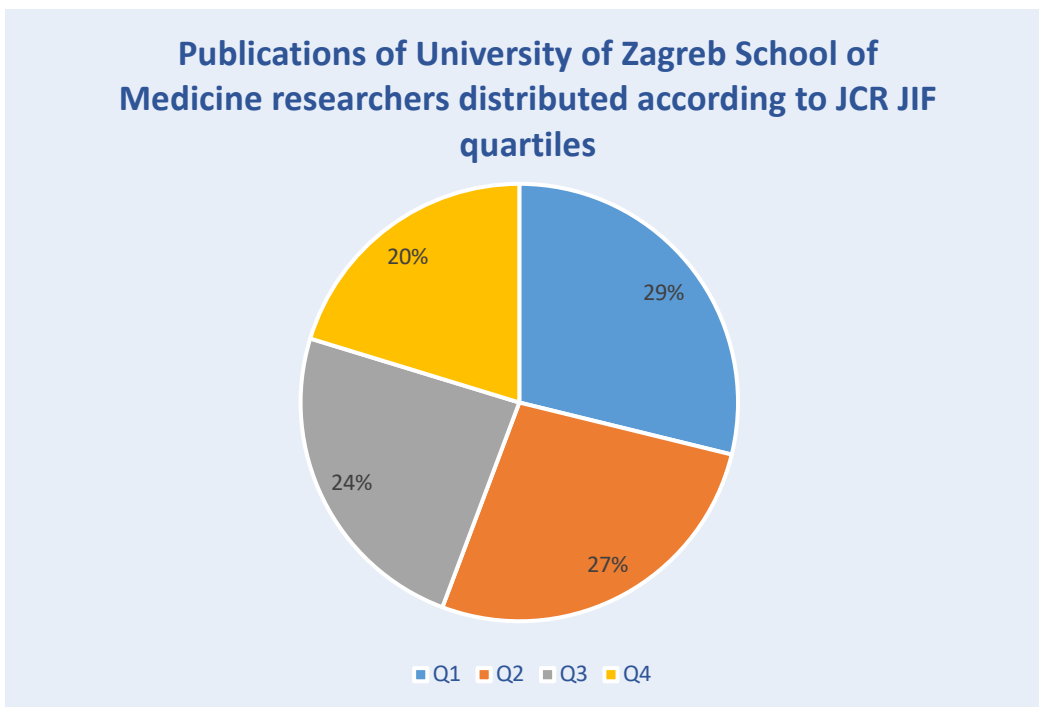


Figure 3. Publications of University of Zagreb School of Medicine researchers distributed according to JCR JIF quartiles (Q1 - Q4).

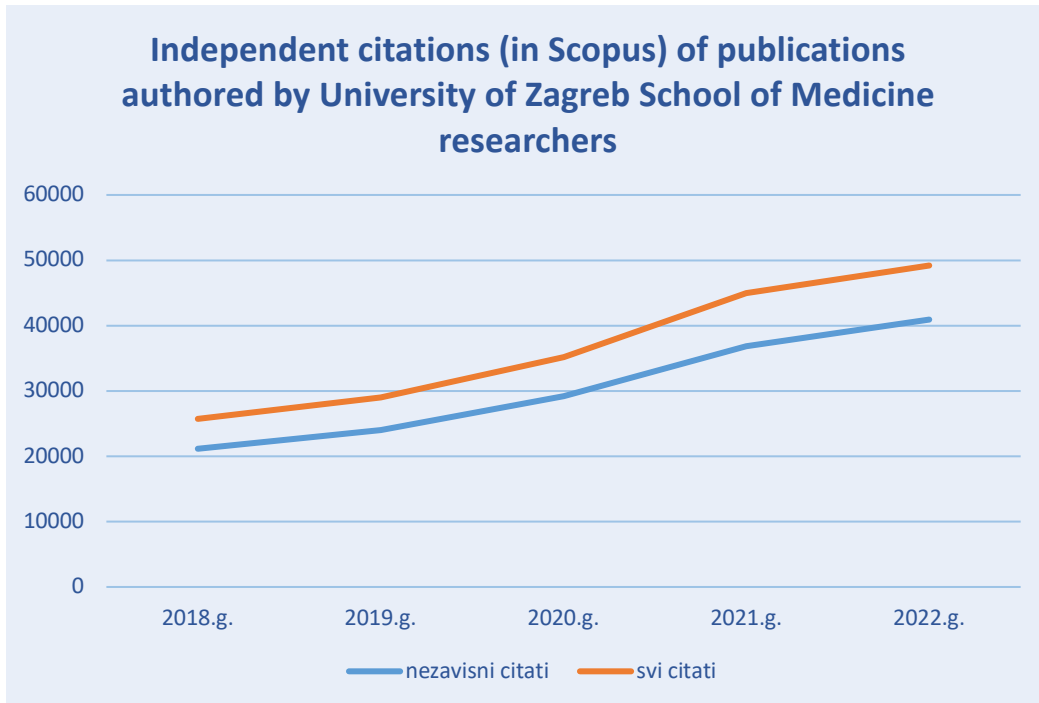


Figure 4. Independent citations (in Scopus) of publications authored by University of Zagreb School of Medicine researchers.

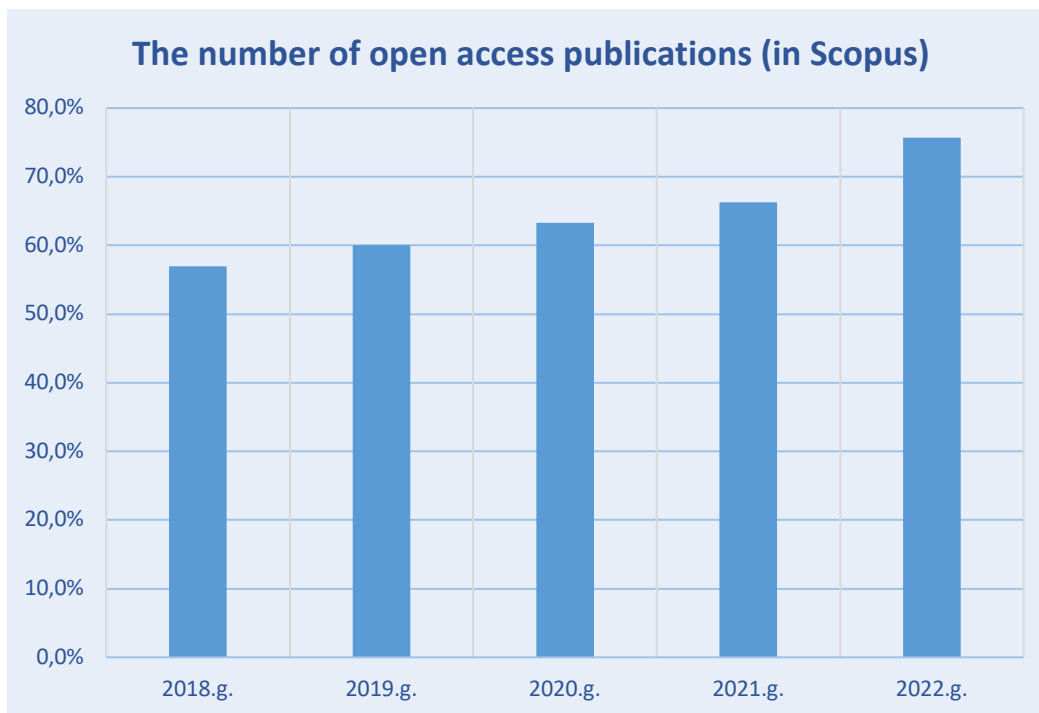


Figure 5. The number of open access publications (in Scopus) of University of Zagreb School of Medicine researchers continuously increases.

The UZSM actively promotes the social relevance of its research in several ways: collaborative research projects with industry and public sector; the application of new technologies and innovations; the development of evidence-based policies; providing professional services and counseling. The UZSM conducts research projects aimed at solving current health issues and improving current medical practices; these research results not only contribute to biomedical advances, but also display positive influences on health care of patients. In most of these research projects, the UZSM primarily collaborates with its clinical hospitals and other health care institutions, in order to enhance direct application of research results for real needs of patients and the community at large. The UZSM provides continuous medical education and professional development courses for health care providers and other experts; thus disseminating new biomedical knowledge and innovations and improving the quality of health care for general population. Professional expertise projects and services are mostly in the field of public health, but the UZSM research is also relevant for pharmaceutical industry and manufacture of medical equipment. The UZSM has been involved in conducting clinical trials for developing new drugs and therapeutic procedures; some of these projects have already enabled the manufacture of new medical devices. The UZSM is also a leading institution in introduction of new technologies and therapeutic procedures in the Croatian health care system, e.g., robotic surgery, laser therapy, diagnostic imaging methods, various forms of transplantation medicine, or state-of-the-art approaches to treatment of stroke patients.

STRATEGIC GOALS

The UZSM strategic goals are fully aligned with national strategic goals of the Republic of Croatia defined in the following key national documents: 1) National Plan of Resilience and Recovery 2021 - 2026; 2) National Strategy of Development of the Republic of Croatia to 2030; 3) Action Plan for Realization of Strategy of Education, Research and Technology - Croatian Government Program 2020 - 2024 (including Smart Specialization Strategy S3); 4) National Guidelines for Technology & Knowledge Transfer, and 5) Decision on Funding Programs for Public Universities and Public Research Institutes in the Republic of Croatia (Official Gazette of the Republic of Croatia no.78/July 14, 2023).

With respect to the development of research programs and activities in 2023 - 2028, the UZSM has defined 2 main strategic goals (each having several specific aims), as follows:

- 1. Improving research excellence**, with the following specific aims:
 - a) Increased participation of the UZSM in competitive research funding
 - b) Reorganization of research activities and organizational reforms
 - c) Strengthening of international research collaboration and activities
 - d) Strengthening human resources for research (especially with respect to employment of young investigators and return of Croatian scientists from abroad - brain gain):
 - e) Improvement of research and information infrastructure.
 - f) Enhancing the interdisciplinarity of research - including the collaboration with clinical research units and other health care institutions.

- 2. Strengthening collaboration** with industry, with the following specific aims:
 - a) Stimulating and enhancing applied research activities, including collaborative research with industry and clinical trial activities;
 - b) Improving the institutional management of intellectual property;
 - c) Improved management of research and technology services for the open market.

EXPECTED OUTCOMES

1. By continuing research programs of its two large research and teaching units (School of Public Health "Andrija Štampar" and Croatian Institute for Brain Research) and its two Centers of Scientific Excellence, the University of Zagreb School of Medicine will serve as national and regional biomedical center of excellence, which enables access to modern research infrastructure (comparable to the infrastructure of leading international centers) for researchers from Croatia and neighboring countries of the South and Eastern Europe. The UZSM is expected to increase its involvement in translational research and efficient transfer of research results into clinical practice (bench-to-bed approach). The UZSM plans to finish the construction of two more research and teaching units (Biomedical Research Area Šalata – BIMIS, and Student Polyclinic - STUP), as well as a new Centre of Simulation in Medicine; this will further enhance the grouping and collaboration of interdisciplinary research groups, as well as efficient use of capital research equipment and infrastructure.

2. By further developing interdisciplinary research groups, and increasing the collaboration with industry and society at large, the UZSM will contribute to efficient development of Croatian industry and society.
3. The UZSM will continue to develop international research collaboration and will strive to increase incoming and outgoing mobility of students and researchers, as well as to increase the number of visiting professors. We need to boost activities of our Alumni Association (especially those members who currently work abroad), in order to secure new types of funding (e.g., donations, scholarship programs for young investigators).
4. The realization of above-mentioned goals will also significantly improve the circumstances for young investigator career advancement, as well as the engagement of more researchers in clinical hospitals and other health care institutions, the development of academic entrepreneurship and providing specialized services for potential business partners.
5. The UZSM will continue to actively engage medical students in research projects (especially in translational research projects), in order to ensure further development of evidence-based medicine and involvement of new generation of medical doctors and researchers in the cycle of knowledge transfer and innovation.
6. Finally, by its permanent focus on translational research, the UZSM also takes part in an important shift in biomedical research paradigm - person-centered medicine, in which patients are involved in research both as partners and as users of research results (e.g., development of new drugs, medical devices, and diagnostics or therapeutic procedures). Moreover, patient associations are encouraged to actively participate in research design (or selection of priority research lines) and research evaluation and assessment; this can significantly decrease research risks, enhance the practical application of research results, and improve administrative and regulatory procedures.

MAIN RESEARCH PROGRAMS (RESEARCH TOPICS)

The University of Zagreb School of Medicine is the oldest, the largest and the only comprehensive Croatian academic institution in the field of biomedicine and health. Therefore, the UZSM is continuously engaged in investigations on the wide spectrum of biomedical research topics (encompassing basic science, clinical science, and public health). The UZSM conducts a large number of active research grants, which are too numerous to be described separately. Instead, here we describe several key and long-term interdisciplinary research programs, because these programs encompass almost all basic researchers as well as a large number of clinical researchers. These programs were already defined as strategic lines of research in our previous research strategies, and key organizational units for their realization have been the following four research and teaching units: 1) "Andrija Štampar" School of Public Health, 2) Croatian Institute for Brain Research (CIBR), 3) Centre of Scientific Excellence for Reproductive and Regenerative Medicine (ZCI-CRRM), and 4) Centre of Scientific Excellence for Basic, Clinical and Translational Neuroscience (ZCI-NEURO).

The “Andrija Štampar” School of Public Health (SPH) closely follows strategic goals defined by the University of Zagreb School of Medicine. To increase its research competitiveness and maintain its research excellence, the SPH will steadily increase its international cooperation with other members of the Association of Schools of Public Health in the European Region (ASPHER), and similar international institutions (e.g., Harvard Medical University, Medical University of South Carolina, London School of Hygiene and Tropical Medicine); encourage exchange of experts and study visits abroad (using Erasmus+ and Fulbright programs). The main focus will be on translational and applied research on the following topics:

- a) Health in society;
- b) Health improvement (quality of life) for vulnerable groups within the Croatian population (participative research, including the strengthening of these groups);
- c) Health management;
- d) Development of polycentric model of decision-making and resource management in the health care system;
- e) Bioethics and public health ethics;
- f) Research related to Covid-19 pandemics and its consequences for health;

The ŠNZ will continue its activities with ASPHER and its summer schools (ASSETS), as well as research and professional cooperation with other international organizations (WONCA, EFMI, EUROACT, EGPRW, etc.). It will strengthen its cooperation with the World Health Organization (WHO), through its existing Collaborative WHO Centre for tracking AIDS epidemic, and by expanding collaboration with the Regional European WHO Office and the WHO Office in the Republic of Croatia.

The SPH will continue its current collaboration with industry (including some market-oriented Ph.D. programs) and its programs of continuous medical education (CME) for health care professionals. The SPH will focus on activities of following research units:

- a) Laboratory for water analysis and balneoclimatology (the role in development of balneology and health tourism);
- b) Centre for promotion of best health care practices (translation of knowledge and innovation);
- c) Centre for Sports Medicine and improving health at the working place.

The SPH will continue to improve current education methods, to introduce new teaching approaches, to conduct research projects on medical education, and to promote previously neglected or underdeveloped lines of research.

The “Andrija Štampar” School of Public Health has been designed and founded to take part in wider social activities. Therefore, it will continue its activities of general (national) interest

- a) continuous follow-up of public health indicators (using appropriate scientific methods), and use of these results for improvement of political decision making in the domain of health;
- b) strengthening green transition;
- c) continuous collaboration with non-governmental sector in promotion of public health and use of scientific knowledge in daily medical practice, especially by conducting the following professional projects:
 - Health management at the level of local community;
 - Croatian network of healthy cities;

- PUB HUB program;
- Health care system and health care politics;
- Health Observatory: development of thematic network for better approach to health.

CENTRE OF SCIENTIFIC EXCELLENCE IN REPRODUCTIVE AND REGENERATIVE MEDICINE

The Centre of Scientific Excellence in Reproductive and Regenerative Medicine was established in 2014, and consists of two research units: Research Unit Biomedical Investigation of Reproduction and Development, and Research Unit for Regenerative Medicine. The main project, funded by the EU (KK.01.1.1.01.0008 "Regenerative and Reproductive Medicine - Investigation of New Platforms and Potentials") has yielded more than 300 publications in international journals, the registration of new patents, and numerous dissemination activities. After the initial 5-year period, the Centre received positive international review of its activities, and received a new 5-year agreement from the Ministry of Science and Education. Thus, its research activities in the coming years will be focused on genetics and epigenetics of infertility, non-invasive diagnostic procedures using fluid biopsies, and introduction of advanced oncofertility (diagnostic-therapeutic) procedures for preservation of fertility in patients with malignant diseases. In addition, the goal is to complete the development of the new drug rhBMP6 (the manufacture of rhBMP6 and initiation of clinical studies), further development of therapy for fibrotic diseases, based on bone morphogenetic protein 1 (BMP1). The biologics rhBMP6 has been developed towards TRL 7 (phase II study), and we are currently preparing for Phase III (production of the protein, conduction of large international multicentric clinical trial). It is expected that these research activities should significantly improve reproductive and regenerative medicine at the national and international level.

CROATIAN INSTITUTE FOR BRAIN RESEARCH & CENTRE OF SCIENTIFIC EXCELLENCE IN BASIC, CLINICAL, AND TRANSLATIONAL NEUROSCIENCE

Note: All relevant information is available at web pages of the Croatian Institute for Brain Research (<http://www.hiim.unizg.hr>) and the Centre of Scientific Excellence for Basic, Clinical and Translational Neuroscience (<http://zci.hiim.hr/index.php/en/zci-neuro>).

The Croatian Institute for Brain Research (CIBR) is a large research and teaching unit of the University of Zagreb School of Medicine, established for multidisciplinary research and organization, execution and promotion of all forms of teaching activities in the field of basic, clinical and translational neuroscience. The main goal and purpose of the CIBR is to serve as center for investigation of the neurobiological basis and plasticity of normal cognitive development, as well as cognitive disorders and plasticity and reorganization responses to lesion in those neurological and psychiatric diseases and disorders (in both children and adults) which have a significant public health, economic and societal impact. The CIBR realizes these goals through interdisciplinary, multidisciplinary and transdisciplinary application of wide spectrum of research methods, thorough integration of basic, clinical and translational neuroscience, and competitive choice of domestic and international research grants.

Therefore, the CIBR is also a "hub" of the research network of Centre of Scientific Excellence for Basic, Clinical and Translational Neuroscience (ZCI-NEURO), which was established on December 11, 2015. The ZCI-NEURO is central point of the new national network for integrating, focusing and improving innovative and translational approaches to early detection, treatment, outcome assessment, and rehabilitation of patients who suffered hypoxic-ischemic or hemorrhagic brain lesions. The ZCI-NEURO research program has three main goals: 1) the continuation of current domestic and international research projects and the application of research results in experimental and clinical approach to stroke and other disorders caused by hypoxic-ischemic cerebral cortex lesions in adults and during development; 2) to develop new in vivo and in vitro experimental models for analysis of hypoxic-ischemic brain lesions and their consequences; 3) to use innovative approaches for early diagnosis, follow-up, treatment and rehabilitation of children and adults with hypoxic-ischemic brain lesions. This program is interdisciplinary and multidisciplinary, because it combines different basic neuroscience disciplines (neuroanatomy, neurohistology, neuroembryology, neuropathology, molecular neurobiology, genetics and genomics, neurochemistry, neuropharmacology, neurophysiology) and clinical neurosciences (neurology, pediatric neurology, neuroradiology, psychiatry, neurorehabilitation, perinatology); it is also in part transdisciplinary, because it combines neuroscience with veterinary medicine, as well as neuroscience with social sciences and humanities (psychology, speech therapy, rehabilitation, linguistics).

OTHER PRIORITY RESEARCH AREAS

Besides the above-mentioned long-term interdisciplinary research programs, our researchers systematically investigate a number of other research topics, and these researchers are mostly pursued at our clinical hospitals. These competitive research grants are quite numerous, and they cover almost all specialty fields in biomedicine and health (and it is quite natural and expected, if one takes into account that University of Zagreb School of Medicine is the largest, the most comprehensive and productive biomedical institution in Croatia). Therefore, here we just point to some additional research themes: cardiovascular diseases, kidney diseases, hematological diseases, intestinal diseases, rheumatic diseases, infectious diseases, transplantation medicine etc.

PLAN OF ORGANIZATIONAL DEVELOPMENT OF RESEARCH ACTIVITIES

Development of Information System and Information Infrastructure

There is a special organizational unit (Section of IT Activities) devoted to the development of information system and information infrastructure at the University of Zagreb School of Medicine. Key strategic elements for that development are: infrastructure/network; hardware; applications.

Infrastructural and network resources: Current internet access speed (1 Gbps) should be increased to 3 or more Gbps, and an additional (back-up) switch should be secured. The speed of the network core should gradually increase from 1 Gbps (current situation) to 10 Gbps. Wireless internet access for employees (Radius system) and students (Eduroam system) should be secured in all working spaces of the UZSM. In all buildings (after their reconstruction) sufficient number of RJ45 ports should be also secured.

Hardware: To establish a secondary (back-up) server room with redundant data center (at the location Šalata 12, that is in the earthquake-resistant building of the Croatian Institute for Brain Research).

Applications: To provide and improve the following services: internet access, e-mail, key web servers, centralized data storage and sharing; support for teaching activities (shared network resources, LMS system etc.); to provide support for administrative activities, using systems TASK, PDS, SEN etc.; to provide systems designed for specific needs of certain organizational units - e.g. ISSA (Department of Forensic Medicine), Pathomation (Department of Pathology), RedCap (support for clinical trials) etc.

Development of Collaboration with Industry and Technology and Knowledge Transfer

Section of Science, Knowledge Transfer and Innovation. According to the new legislative framework, technology transfer activities became important in assessment of academic success on both institutional and individual level. This highlights the importance of our newly established Section of Science, Knowledge Transfer and Innovation, and its position within the innovation system. This Section will closely collaborate with Centre for Research, Development and Technology Transfer (CIRTT) of the University of Zagreb. The tasks of this Section are as follows:

- to define indicators of the realization of set strategic goals of the UZSM;
- to define indicators of research productivity, and criteria for awarding the most productive researchers;
- to define criteria for evaluation of research grants, as well as follow-up of doctoral students, young researchers and evaluation of Ph.D. thesis supervisors;
- to define indicators for assessment of performance quality of administration employees (e.g. quality assessment for human resources service, the accounting and public procurement service, information and technical support and maintenance service, library service etc.).

Moreover, this Section has to continuously pursue the promotion of ethical principles, academic integrity and responsible conduct of research. Already existing documents describing appropriate rules and procedures should be updated: e.g., Rules of Institutional Review Board; General Rules for Conducting Research, Professional and Teaching Activities; Rules of Good Academic Practice in Writing, Reviewing and Publishing Research Publications; Rules of Good Academic Practice in Research; Rules and Procedures for Handling Allegations on Unacceptable Conduct and Scientific Fraud.

Office for Technology Transfer (OTT). By supporting the technology transfer and allocating more funds for applied research and experimental development, School of Medicine aims to help public and private research community to approach the market, to commercialize research and to transform new knowledge into an intellectual property. It should be noted that national Strategy of Smart Specialization to 2029 explicitly provides funding for proof of concept projects and technology transfer. Moreover, national Plan of Recovery and Resilience provides funding for proof of concept projects and technology transfer (see section C3.2 R3-I1), while additional funding is expected from European Structural and Investment Funds (ESIF) for 2021 - 2027. However, in order to become eligible for using these forms of national funding, the UZSM has to meet minimum acceptable criteria. For example, it must have a defined policy for knowledge and technology transfer, which encompasses the strategy of technology transfer and is transparently communicated to researchers and public in general. It also must have defined rules and procedures for technology transfer, which are easily available to all parties involved in the technology transfer; it must establish an internal OTT; it must define transparent general rules for sharing the profit, for contractual and collaborative research, for licensing and for foundation of spin-off companies.

Therefore, the UZSM has to establish a separate OTT (as a part of the Section of Science, Knowledge Transfer and Innovation). This OTT has to function efficiently, according to professional standards, and to widen the spectrum of its services. The OTT has to create guidelines for efficient use of publicly funded research, for appropriate management of intellectual property, to enhance commercialization, development of entrepreneurship and related skills, and to enhance the interaction between public and private sector. The OTT employees must be able to provide support to research grant applications in the field of innovation, technology and creative industry; to protect and manage author, patent and related rights of the UZSM and its researchers. Finally, the OTT must provide some added value for researchers, such as specialized services. In short, the OTT must be service oriented and must have clearly defined business strategy.

For the establishment of its OTT, the UZSM will use the so-called lean approach to funding - the internal OTT will initially focus on priorities for which it has adequate capacities, while the remaining activities will be allocated to researchers or outsourced. It should be noted that the OTT also has to meet minimum eligibility criteria. For example, it must have evidence on services provided to researchers; the established methodology for prioritizing services; the tool for registration of intellectual property and research competency. In addition, the OTT has to provide counseling on planning and designing research, licensing, basic market analysis, cost-benefit assessment, basic valuation of intellectual property and marketing activities. The OTT also has to provide draft agreements on licensing, on sharing intellectual property rights, and on keeping the confidentiality of data. Therefore, it is an important strategic goal of the University of Zagreb School of Medicine to introduce and efficiently use all these procedures and activities as soon as possible.

HUMAN RESOURCES POLICIES FOR BASIC RESEARCH DISCIPLINES AND PUBLIC HEALTH PROFESSIONALS

With respect to human resources, there are some long-standing challenges to be solved, if possible. For example, one cannot have a proper medical study if freshly graduated doctors of medicine have no incentive to get a job in basic science research and teaching departments (e.g. anatomy, histology, physiology) - as a rule, medical doctors have to teach future medical doctors. Moreover, the researchers presently working at the UZSM are among those who are significantly contributing to international visibility and recognition of the UZSM. Therefore, the UZSM has to examine all opportunities for increasing the salaries of young researchers and future teachers (as well as laboratory technicians) employed in departments for basic medical sciences. Similar problems also exist in the field of public health. Thus, we should increase the number of employees with double appointment - part-time employed at the School of Medicine, and part-time employed in other health care institution. That would not only improve the material status of young researchers and teachers, but also ensure higher professional standards in health care institutions.

Finally, there is a need for re-accreditation of our clinical hospitals. The UZSM has to renew collaboration agreements with key clinical hospital centers and other health care institutions. These agreements should respect a basic academic hierarchy when it comes to appointment of hospital directors, departmental chairs, and other leading positions; they should also provide joint criteria for selection and employment of new researchers and residents.

Indicators of the Successful Implementation of the Strategic Scientific Research Program		
Main goal 1: Improving research excellence		
Specific aim	Indicators of success	Implementation at the School level
Increased participation of the UZSM in competitive research funding	<ul style="list-style-type: none"> increased number of submitted and funded competitive research grants (in comparison to the previous period) 	<ul style="list-style-type: none"> Dean's Council Department of Science, Knowledge Transfer and Innovation
Reorganization of research activities and organizational reforms	<ul style="list-style-type: none"> bringing together related research groups; strengthening of synergy of complementary research groups and laboratories; enhancing the function of the central Department of Science, Knowledge Transfer and Innovation; establishment of the Office for Technology Transfer (OTT). 	<ul style="list-style-type: none"> Dean's Council Faculty Council Branches of the School
Strengthening of international research collaboration and activities	<ul style="list-style-type: none"> increased number of collaboration agreements with leading international academic institutions; increased number of publications co-authored with researchers from other countries; increased number of Ph.D. theses in which researcher from other country is co-mentor / second supervisor; increased number of visiting professors and researchers from abroad. 	<ul style="list-style-type: none"> Dean's Council Department of Science, Knowledge Transfer and Innovation Vice-dean for International Relations Vice-dean for Science Vice-dean for Postgraduate Studies
Strengthening human resources for research (especially with respect to employment of young investigators and return of the Croatian scientists from abroad - brain gain)	<ul style="list-style-type: none"> increased number of young investigators (doctoral and postdoctoral students); increased number of qualified Ph.D. thesis supervisors (Mentorship Workshops); systematic engagement of medical students in research projects and activities. 	<ul style="list-style-type: none"> Dean's Council Vice-dean for Science Committee for Student Research Papers Branches of the School
Improvement of research and information infrastructure	<ul style="list-style-type: none"> upgrading of the existing and purchasing of new capital research equipment; written Rules on the Use and Maintenance of the UZSM Information System; written Action Plan for the Development of the UZSM Information System; internet access speed increased from 1 Gbps to 3 or more Gbps; network core speed increased from 1 Gbps to 10 Gbps; ensured wireless internet access for staff and students at most locations within the UZSM; established central data storage and sharing; established back-up server room with redundant data center (location Šalata 12); defined cycle (purchase plan) for regular replacement of PCs for individual users and for teaching spaces (classrooms) and administration offices; centralized printing facility (i.e., decreased number of printers for individual users). 	<ul style="list-style-type: none"> Dean's Council IT Department
Enhancing the interdisciplinarity of research - including the collaboration with clinical research units and other health care institutions	<ul style="list-style-type: none"> formation of new interdisciplinary research teams; establishment of new forms of research collaboration with researchers in clinical hospitals; establishment of new forms of research and professional collaboration with researchers in other health care institutions; establishment of new forms of research, professional and educational collaboration with patient groups and associations. 	<ul style="list-style-type: none"> Dean's Council Branches of the School Clinical teaching bases

Indicators of the Successful Implementation of the Strategic Scientific Research Program

Main goal 2: Strengthening collaboration with industry

Specific aim	Indicators of success	Implementation at the School level
Stimulating and enhancing applied research activities, including collaborative research with industry and clinical trial activities	<ul style="list-style-type: none"> ▪ The UZSM has defined policy of knowledge and technology transfer, with clearly defined strategy and aims for technology transfer; ▪ The UZSM has consistent and transparent mechanisms of providing information on its program of knowledge and technology transfer to researchers and public in general; ▪ The UZSM has efficiently functioning internal OTT; ▪ The UZSM has established rules and procedures for technology transfer, which are easily available to all interested parties; ▪ The internal OTT has established reporting procedures and communication channels with School's researchers and potential outside partners. 	<ul style="list-style-type: none"> ▪ Dean's Council ▪ Faculty Council
Improving the institutional management of intellectual property	<ul style="list-style-type: none"> ▪ The UZSM has transparently defined general rules for profit sharing between all parties involved in technology transfer activities; ▪ The UZSM has transparently defined general rules for contracted research; ▪ The UZSM has transparently defined general rules for collaborative research; ▪ The UZSM has transparently defined general rules for intellectual property licensing; ▪ The internal OTT provides basic valuation of intellectual property (defining prices and terms of licensing). 	<ul style="list-style-type: none"> ▪ Dean's Council ▪ Faculty Council
Improved management of research and technology services for the open market	<ul style="list-style-type: none"> ▪ The internal OTT keeps evidence on providing services to researchers; ▪ The internal OTT has established methodology for prioritizing services offered; ▪ The internal OTT has tools for tracking intellectual property and researcher's competences; ▪ The internal OTT has established and published Draft Licensing Agreement, and provides help to researchers in composing such agreements; ▪ The internal OTT has established Draft Data Confidentiality Agreement and Draft Intellectual Property Sharing Agreement; ▪ The internal OTT provides basic market analysis; ▪ The internal OTT provides basic methodology for cost-benefit analysis; ▪ The internal OTT provides marketing services, i.e., at least has market-oriented content on its web page. 	<ul style="list-style-type: none"> ▪ Department of Science, Knowledge Transfer and Innovation ▪ Office of Technology Transfer