

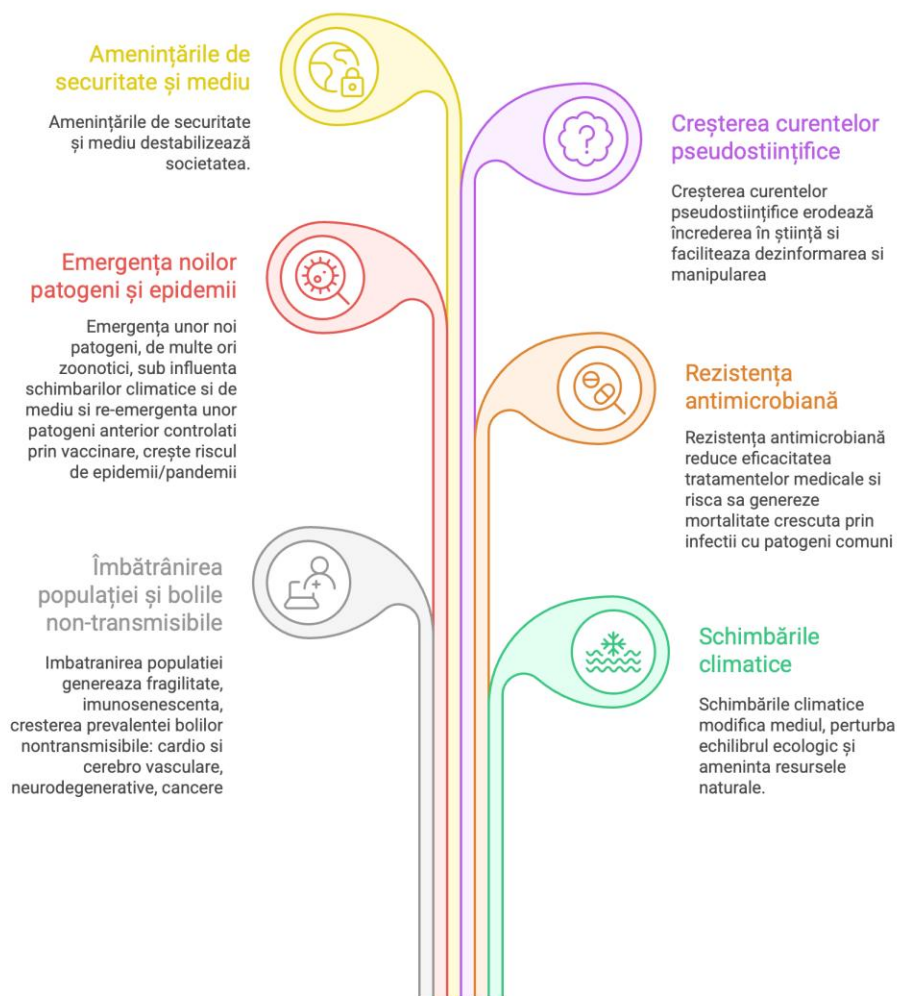


DEVELOPMENT STRATEGY
OF RESEARCH ACTIVITY IN
UNIVERSITY OF MEDICINE AND PHARMACY
"CAROL DAVILA" FROM BUCHAREST
2025 -2029

Vision. By 2030, the Carol Davila University of Medicine and Pharmacy (UMFCD) will evolve towards the status of a regional European leader in biomedical research, representing a model of excellence and diversity in life sciences research and innovation, with major scientific, social and economic impact.

Mission : To develop an environment conducive to excellent research, based on meritocracy, ethics and moral integrity, that respects diversity, promotes international collaboration and stimulates innovation, in order to contribute to solving society's global health problems and to promote prevention-oriented medicine.

Provocări globale interconectate



PURPOSE . Advanced scientific research, whether fundamental or applied, represents an essential pillar in maintaining the health of the population, through which UMFCD is actively involved in finding innovative solutions to reduce the main causes of morbidity and mortality at the societal level.

GUIDING PRINCIPLES

principles which guide scientific research in UMFCD are:

1. **Promoting excellence and competitiveness** in research, as a means of intrinsic development and training specialists capable of responding to the challenges of the future.
2. **Respect for ethics and moral integrity** , fundamental values that guide the entire activity of UMFCD
3. **Social responsibility** and encouraging a **participatory approach** , in which citizens contribute to defining the objectives of medical research.
4. **Free movement of knowledge, education, innovation and researchers** – "Fifth freedom" as an essential pillar of innovation and the knowledge-based economy
5. **Equity, diversity and inclusion** – Promoting a fair research environment, without discrimination based on gender, ethnicity or professional status
6. **Sustainability and societal impact** , with research oriented towards global and local challenges, in relation to sustainable development goals

NATIONAL AND EUROPEAN CONTEXT

The research development strategy is an integral part of the Strategic Institutional Development Plan 2021-2029 and responds to national priorities in the field of biomedical research. In developing this document, the provisions of the following relevant national documents were taken into account :

- National Strategy for Research, Innovation and Smart Specialization (SNCSII) 2022-2027,
- Higher Education Law 199/2023, with subsequent amendments,
- Research Law 183/2024,
- National Health Strategy 2023-2030,
- National Recovery and Resilience Program (NRRP),
- Operational Programme for Smart Growth, Digitalisation and Financial Instruments 2021-2027, European Structural and Investment Funds (ESIF),
- Documents and opinions of the Board of Directors and the Scientific Council of UMFCD, previous R&D strategies of UMFCD, and other documents of public interest.

Agenda strategist A COUNCIL European (2024–2029) recognizes the fundamental role of research and innovation to increase Europe's competitiveness and pursue consolidation autonomy POLICY in AREAS critical AS health, security and technology, encouraging cooperation and solidarity of member countries, for answers coordinated to the challenges The strategy for the development of UMFCD's scientific research activity incorporates the principles and recommendations of the 2024-2029 strategic policies of the European Union in the field of research and health, the following relevant documents being consulted in its drafting :

- European Union Framework Programme for Research and Innovation 2021 – 2027,

- Plan 2025-2027,
- The FP10 draft program and the preparatory documents (the Draghi report *A competitiveness strategy for Europe* , the Letta report - *Much more than a market – Speed, Security, Solidarity Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens* , EARTO Paper on EU Partnerships in FP10: *How to boost Future EU Public-Private Partnerships?*)

In 2024, UMFCD obtained the **HR Excellence in Research** distinction from the European Commission, a recognition granted to research institutions that have made progress in implementing the principles established in **the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers** by aligning the policies governing research and human resource selection.

In the current context of defining the research strategy of the next European Union FP10 framework program, UMFCD actively advocates for a series of initiatives to support research:

- allocating a **significant and predictable budget** to support research and innovation at national and European level
- promoting **international collaborations and public-private partnerships** to avoid research fragmentation and for an integrated approach to global health challenges.
- strengthening **open science practices** , including data management according to FAIR principles, long-term data preservation and supporting the central platform for data exchange EOSC (European Open Science Cloud)
- **digital transformation** in biomedical research, with a focus on integrating digital health tools, artificial intelligence and “big data” into health research
- supporting **innovation ecosystems** to facilitate collaboration between industry and academia
- **intersectoral collaboration** , to enable greater **involvement of end-users and citizens** in the definition and implementation of research

- **s simplification and efficiency in funding** procedures to reduce administrative burden and s simplification of reporting and evaluation processes

STRATEGIC OBJECTIVES

. SO 1. Developing the strategic framework for supporting high-performance scientific research and for full integration into the European Research Area

- a. Focusing research directions on the development of personalized medicine, using "omics" sciences for disease risk prediction, early diagnosis and identification of targeted treatments, adapted to the particularities of patients.
- b. Identifying and supporting as a priority strategic research directions in which the university has important competitive advantages, through which it generates cutting-edge scientific knowledge and lays the foundations for innovative solutions transferable to the economy and/or public health policies
- c. Stimulating frontier projects that incorporate genomics, biotechnologies, digital health and artificial intelligence to respond to European guidelines for funding disruptive and exploratory ideas.
- d. Redefining the status of the researcher in medicine, by promoting measures that encourage diversity in the academic career, facilitating the combination of scientific research with medical and teaching activities (sabbatical year for research, promoting the status of the medical researcher in the researcher law, integrating research as an optional internship in residency, developing an alternative path of researcher-clinician in medical practice and the existence of research directors in hospitals)
- e. Implementing an open, transparent and merit-based (OTM) policy in recruiting researchers, with a wider opening of the academic environment to researchers

from the private sector and from abroad, and encouraging the attraction of researchers with advanced skills from abroad to lead research projects.

- f. Adoption and implementation of an institutional open science policy that encourages free access to data and publications
- g. Implementing **policies in support of the European reform of research evaluation** , by stimulating the development of new evaluation methods, which recognize the widest possible spectrum of activities (including science communication, generation and implementation of new technologies, artificial intelligence systems)
- h. Strengthening an **ethical and professional framework** aligned with **the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers** and ensuring a favorable environment for professional development (attractive, stable and inclusive, with the development of continuous training programs for researchers and academic staff), according to the commitments in the HRS4R strategy:
- i. Accelerating activities dedicated to technology transfer, to capitalize on research results with high translational and application potential, with chances of generating patents, spin-offs and start-ups

Expected results:

- Concentrating research directions in strategic areas, developing research opportunities in international consortia and encouraging the establishment of interdisciplinary research teams
- Attracting strategic research projects
- Increasing the number of international partnerships that promote excellent research
- Increasing the quality of scientific publications and integrating research into the medical career and diversifying scientific contributions

- participation in defining European research policies, including the free movement, mobility and career of researchers

SO 2. Developing an open research infrastructure and promoting digitalization

1. Consolidation of the common research infrastructure in UMFCD and of advanced structures that incorporate emerging technologies and artificial intelligence systems through:
 - a. Complete operationalization of the Genomics Research and Development Institute and support for its activity, both through UMFCD's strategic projects and through active participation in European initiatives in the field of genomics (1 million+ genomes, EDIC, Genome of Europe)
 - b. Creating an open research infrastructure of UMFCD, starting from Research Center in the field of cardio and cerebrovascular diseases, infrastructure included in the roadmap of research infrastructures of national interest and identification of additional sources of funding to support the construction and operationalization of this infrastructure
2. Development of the Clinical Trials Hub and the collaborative platform with the biomedical and pharmaceutical industry, as well as the establishment of an Academic Research Organisation structure, to facilitate the development of clinical trials and joint public-private research projects and to support the practical training of researchers
3. Promoting joint inter- and transdisciplinary activities through:
 - a. Supporting open access to equipment, services and expertise in research centers functional (*InnoTher Center for Research and Development of Innovative Therapeutic Structures* , *Interdisciplinary Center for Research and Development in Dentistry* -CICDS, Center for Research in Cardiovascular Diseases) and maintaining endowments at a "state of the art" level

- b. Establishing new centers of excellence through projects won at national level with a high-performance and open infrastructure
 - c. Developing a methodology for the establishment and evaluation of interdisciplinary research centers and the priority stimulation of high-performing research centers, with visible international results and prospects for integration into European research networks and infrastructures
 - d. Updating and reorganizing data corresponding to laboratories and research centers within UMFCD in the new improved EERTIS platform, with the definition of research facilities, laboratories, equipment and available services
 - e. Enhancing the research infrastructure by updating, maintaining and continuously developing it and prioritizing the acquisition of high-performance research equipment, used in an open access regime
 - f. Optimizing access to existing infrastructure through interoperability policies.
4. Investments in high-performance digital infrastructure, for the integration of artificial intelligence, large volumes of medical data and secure cloud systems in medical research through:
- a. Participation in pan-European digital infrastructures (e.g. EOSC) for storing, analyzing and sharing health data in an open, accessible, integrated, reproducible and secure way.
 - b. ensuring solid governance through institutional policies for ethics, security, interoperability and patient data protection, aligned with EU standards
5. Promoting innovation and technology transfer through incubators and innovation hubs, and by developing international partnerships (direct collaboration agreements with institutes, research centers, networks and international alliances)

Expected results:

- Creating relevant, accessible and open research infrastructures for the entire academic community, integrated into strong international networks and alliances
- Affiliation to European advanced research infrastructures, international networks and European University Alliances with common research ecosystems

OS 3. Attracting, supporting and retaining human resources in research

1. Increasing **the involvement of students and teachers** in research activity through:

- a. developing a **mentoring** program that connects early-career researchers with experts in the field,
- b. initiating a **shadowing program** that connects students with doctoral students within research projects
- c. participation in a virtual health **research center , together with central and eastern European countries,**
- d. promoting **research-based learning** as a method of advanced education

2. Supporting **early-stage researchers** by creating a stimulating environment and ensuring favorable conditions for keeping them active in medical research, by continuing:

- a. Carol Davila Research Grants for short/long-term research mobilities,
- b. internal research grants for doctoral students and postdoctoral researchers
- c. Seed Fund projects - launch fund dedicated to small interdisciplinary, short-term collaborative projects, for establishing consortia and supporting exploratory directions with a view to applying to collaborative research projects at European level

3. Retention and **development of senior researchers** through:

- a. supporting participation in international research networks,
- b. providing a high-performance logistics infrastructure for project applications,
- c. supporting a functional research management mechanism

4. Developing a **mobility framework** for researchers through:

- a. European recruitment,
- b. partnerships with allied universities,
- c. attracting high-performing international researchers,
- d. encouraging the return to the country of diaspora researchers with notable research results, supporting debureaucratization and flexibility of employment and promotion methods .

5. Permanent and intense **collaboration** with:

- **The Council for Doctoral University Studies and the Doctoral School** to support the attraction and training of talents to create the critical mass necessary for scientific sustainability in UMFCD

- **Center for Innovation and E-Health (CieH)** – the structure of UMFCD subordinated to the Vice-Rectorate for Digitalization, which supports, develops and encourages innovation and technological transfer and develops students' skills and competencies in innovation and digital health activities to increase competitiveness and adapt to the digitalization of educational and health systems

6. **Diversifying research contributions:**

- a. Recognition of **the diversity of research results** (publications, patents, contributions to public policies)
- b. Supporting **the diversity of research careers** , including for research managers, data administrators, technical experts and science communicators

7. Developing new mechanisms for **increasing the quality and impact of scientific results** through:

- a. publication in top journals;
- b. increasing the number of patents,
- c. refining the successful program: Stimulating publication - "Publish not perish")
- d. promoting innovative entrepreneurship

8. Creation of an **operational platform within DCDI** , with multiple functionalities, for better recording of applications for research projects, a more efficient and transparent development of awarded research projects and an optimal exploitation of research results

9. Stimulating **access to additional funds** dedicated to scientific research by providing professional administrative support in identifying partners, submitting funding applications in national/international competitions and the logistical and financial development of won research projects, as well as by quickly informing the scientific community about funding opportunities (Com Digitale system, newsletter, webinar "An hour with research")

Expected results:

- Attracting international researchers with experience and visibility, promoting future research talents, defining specific trajectories to support young researchers and creating optimal premises for reforming the way research is evaluated.
- Developing career opportunities and supporting the establishment of interdisciplinary research teams;
- Attracting new sources of financing

OS. 4. Increasing the visibility and impact of scientific research at national, regional and international levels

Active participation in the design of European research policies and in defining the objectives of EU-funded research programs, by capitalizing on the opportunities generated by the fact that UMFCD is the first university in Romania accepted as a member of UnILiON (Universities Informal Liaison Offices Network), a network based in Brussels, comprising 157 universities in Europe and Japan (<https://www.unilion.eu/>), which facilitates the exchange of information and direct contact with relevant structures and policy makers in European research

1. Promoting an **organizational culture** based on integrity by increasing the visibility of excellent research projects and developing digital platforms for the transparent management of research projects and the dissemination of results.
2. Supporting **major events** dedicated to the dissemination of scientific research,
 - a. The UMFCD Congress, which strengthens the initiation of those at the beginning of their journey, the evolution through continuing education of those active in their medical career, and excellence through scientific research, strengthening the sense of belonging to a strong and relevant community.
 - b. Supporting congresses and international conferences organized by student societies
 - c. Presentation of exceptional projects and achievements obtained in scientific research, with wide dissemination at national, European and international levels to the media and society, to inform, educate and raise awareness of citizens - direct beneficiaries of research in the biomedical field.
3. Involving affiliated members of UMFCD (DHC, visiting professors, alumni) in initiating joint research programs and promoting the achievements of UMFCD's scientific research
4. Supporting members of the academic community to occupy top positions in decision-making bodies at national, regional and international levels
5. Exercising an active lobby to promote UMFCD research initiatives to national and European policy makers (workshops, round tables, conferences, informal meetings, strategic documents)

6. Developing fundraising mechanisms to stimulate research and increase the visibility of research results
7. Civic involvement and societal impact through:
 - a. Encouraging the involvement of citizens and communities in defining the research agenda,
 - b. Promoting open science: free access to publications, data sharing, involvement in cross-border projects.
 - c. Developing social responsibility policies in research, to ensure that university research contributes to the well-being of society (health, security, equity).
8. **Financing and sustainability** through:
 - a. Active pursuit of FP10 funding, with a clear application strategy on priority directions (genomics, AI, digital health).
 - b. Simplifying internal procedures for access to funding and reporting, to reduce administrative burden and increase efficiency,
 - c. Mobilizing private and public funds through strategic partnerships to pool resources and increase innovation capacity

Expected results

- Strengthening the international visibility of UMFCD in research-development-innovation activities and in international university rankings;
- Promoting an attractive, fair, ethical and moral environment in scientific research
- Increasing public accountability and UMFCD's involvement in society, by developing research partnerships with relevant entities in the health system

5. CONCLUSIONS AND COMMITMENTS

The University reaffirms its commitment to excellence in research and to European values regarding diversity, collaboration and social impact. The research strategy will guide the continuous development of an inclusive and innovative academic environment, in which

researchers can contribute to knowledge and society at the highest level, **to strengthen the role of UMFCD as an opinion leader, active participant in initiating health policies and active contributor to community life.**

The strategy will be periodically analyzed and supplemented with the main news and emerging directions in the medical field and with the guidelines established by future national and European strategies.