LMU HOSPITAL

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN FACULTY OF MEDICINE

Fact Sheet Research 2025

LMU Faculty of Medicine

The Faculty of Medicine and the university hospital of Ludwig-Maximilians-Universität München (LMU Munich) are among Europe's leading centers of academic medicine. The university is connected to milestones and persons of the history of medicine: Wilhelm Conrad Röntgen (x-rays), Alois Alzheimer (neurodegenerative dementia), Max von Pettenkofer (hygiene), Adolf Friedrich Johann Butenandt (sexual hormones) and Feodor Lynen (cholesterol synthesis).

The faculty is member of all eight German Centers for Health Research (cancer, cardiovascular diseases, child and adolescent health, diabetes, infection, lung diseases, mental health and neurodegenerative diseases research). These centers reflect the foci of medical research that are actively pursued in Munich, from the basic preclinical and clinical disciplines to rare diseases research. As part of the national program for excellence the faculty hosts the Munich Cluster for Systems Neurology. Faculty members are speaker of three nationally supported Collaborative Research Centers ("Sonderforschungsbereiche") by the German Research Foundation (DFG) and coordinate seven European, BMBF and Bavarian projects. Members of the faculty hold currently one Synergy Grant, two Advanced Grants, six Consolidator Grants and nine Starting Grants by the European Research Council (ERC).

LMU Hospital

"Gemeinsam. Fürsorglich. Wegweisend – Sharing. Caring. Pioneering." – is the mission of LMU Hospital.
Together with its patients and partners it strives for ground-breaking research and treatments in a caring environment.

Thanks to its achievements in research, teaching and patient care, the university hospital enjoys an excellent reputation both nationally and internationally. Its 11,683 staff members in the areas of medicine, patient care, administration, technology and maintenance are taking care of patients in 48 clinical departments, institutes and divisions. In addition, 53 interdisciplinary centers offer individual medical care. Interdisciplinary collaboration of experts from different medical areas enables efficient diagnosis and therapy. More than 500,000 patients are treated annually at both locations, the Campus City Center and the Campus Großhadern. With 2,062 beds, the university hospital provides high standards of diagnosis, treatment and nursing, and is one of the largest university hospitals in Europe. The university hospital has an annual turnover of 1.4 billion Euro. This includes an annual research and teaching budget of 163 million Euro from the state of Bavaria. The faculty and the university hospital secure additional third-party funding of over 171 million Euro per year.

Campus City Center

LMU University Hospital is one of the largest hospital complexes in Germany. The Campus City Center is located only one kilometer from Marienplatz, the heart of Bavaria's capital. Its history dates back to a foundation hospital of the Brothers of Mercy in 1754. The **Max von Pettenkofer Institute (1)** is named after Max Joseph von Pettenkofer, the scientific founder of modern city sanitation and hospital hygiene. The **Institute of Anatomy (2)** was completed in 1907. It is one of the first steel concrete constructions in Germany. Other preclinical institutes of the faculty include the **Institutes of Physiology (3)**, **Medical Psychology and Human Genetics (4)**, **Ethics, History and Theory of Medicine (5)**, **Pharmacology and Toxicology (6)**, **Legal Medicine (7),** and **Pathology (8)**. The **Dr. von Hauner Children's Hospital (9)** from 1846 is named after its founder, Dr. August von Hauner. The **Departments of Psychiatry and Psychotherapy (10)** witnessed Alois Alzheimer's first description of Alzheimer's disease and the work of Emil Kraepelin. Germany's first heart transplantation was performed in 1969 at the **Department of Surgery (11)** in Nußbaumstraße. Other departments of the university hospital at the Campus City Center include the **Departments of Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy (12)**, **Dental Medicine (13)**, **Oral and Maxillofacial Surgery and Facial Plastic Surgery (14)**, **Radiation Oncology (15)**, **Dermatology and Allergy (16)**, **Radiology and Nuclear Medicine (17)**, **Internal Medicine (18)**, **Otorhinolaryngology (19)**, **Ophthalmology (20)**, and **Clinical Pharmacology (21)**. Opened 2021, the modern, interdisciplinary **"Klinikum Innenstadt" (22)** with 200 patient beds comprises expertise in the fields of internal medicine, surgery, emergency aid and obstetrics and gynecology. On a total of additional 12,400 square meters of floor space it provides high-end medicine in the city center for generations of patients to come.

Biomedicine for Life and Quality of Life

The research profile of the Faculty of Medicine comprises six focal areas (columns). They are connected by the two interdisciplinary areas "Personalized Medicine" and "Digital Medicine" (rows).

	 Molecular Biomedicine	 Fight against Cancer	 Inflammation and Infection	 Vascular and Transplantation Medicine	 Neuro-sciences	 Medicine for Society
Personalized Medicine						
Digital Medicine						

Campus Großhadern

The Campus Großhadern hosts most of the high-tech medicine of the university hospital. The **Main Patient Ward Building (1)** is lovingly called "the toaster". It hosts 1,137 beds in total. Adjacent to it, the **Surgical and Acute Care Center (2)** houses emergency rooms, operating rooms and intensive care units. The main building is connected to the **Lecture Halls (3)**, a main teaching site of the faculty. Together, these buildings form the heart of the university hospital Campus Großhadern.

The Campus will be greatly expanded in the coming 20 years, including a new **Children's Hospital (4)**. The university hospital is surrounded by a cluster of excellent biomedical, preclinical and clinical research centers including the **Center of Stroke and Dementia Research (5)**. The new research building **Interfaculty Center for Endocrine and Cardiovascular Disease Network Modelling and Clinical Transfer (ICON) (6)** was completed in 2024, see box below.

The neighbouring building for **Microbiological and Virological Diagnostics (DIAG) (7)** was completed in early 2025. In proximity to **Neuropathology (8)**, the **Gene Center (9)**, **BioSysM, the Center for Molecular Biosystems (10)**, and the **Faculty of Chemistry and Pharmacy (11)** are strong partners in research and teaching. At the western border of the Campus Großhadern, separated by sports facilities and a small forest, lies the **Biomedical Center (12)** of the Faculty of Medicine, the LMU Biocampus Martinsried housing the **Faculty of Biology (13)**, the **Startup Campus (14)** and the **Max Planck Institutes for Neurobiology (15)** and **Biochemistry (16)**. Together, these institutions and the startup companies at Campus Großhadern and Martinsried form one of the largest and most active biomedical clusters in Europe.

ICON - The New Research Building at Campus Großhadern

The new research building "Interfaculty Center for Endocrine and Cardiovascular Disease Network Modelling and Clinical Transfer (ICON)" has been approved for funding by the German Science and Humanities Council („Wissenschaftsrat"). It bundles the expertise of the Faculty of Medicine and the Faculty of Veterinary Medicine to develop innovative diagnostic and therapeutic methods for endocrine and cardiovascular diseases.

Innovative concepts from basic research will be validated using tailored large animal models. The center is closely linked to the university hospital and its Clinical Study Center, ensuring rapid translation of research into clinical practice. ICON was funded with Euro 61.2 million, shared by the federal government and Bavaria. With 6,800 total square meters it offers state-of-the-art laboratory and office space. Opened in December 2024, it will mark a significant milestone in advancing research in the field of cardiovascular diseases, according to the World Health Organization (WHO), the most common cause of death worldwide.

Facts and Figures

Departments and staff

14 basic science and preclinical institutes
48 university hospital departments, divisions and institutes

13,200 staff members, thereof:
1,517 basic science & preclinical
11,683 university hospital

Research

33 Mio. Euro third-party (basic science & preclinical)
138 Mio. Euro third-party (university hospital)
163 Mio. Euro research and teaching (university hospital)

3,586 publications, 25,094 JIF (total), thereof:
437 publications, 3,722 JIF (basic science & preclinical)
3,149 publications, 21,372 JIF (university hospital)

2,025 active clinical studies, thereof:
766 active interventional studies

Patient care

2,062 in-patient beds
88,575 in-patients (including day-care patients)
420,641 out-patients

Teaching

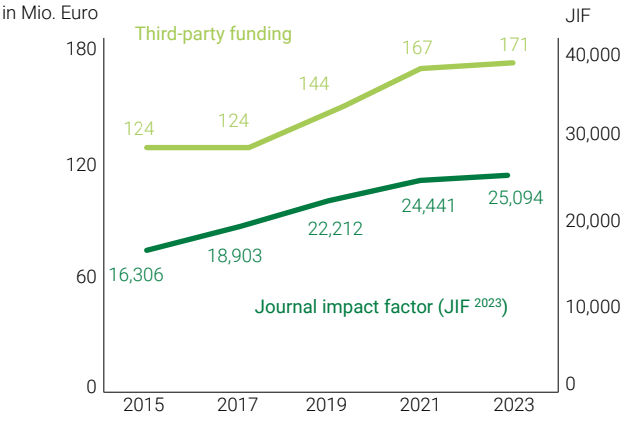
204 professors, thereof:
65 basic science & preclinical
139 university hospital

60 completed habilitations
611 completed doctoral degrees

6,737 students, summer term 2023
7,190 students, winter term 2023/2024

(numbers of 2023)

Academic Excellence



Research consortia

- 1 Cluster of Excellence
- 3 Collaborative Research Centers (nationally funded, Speaker)
- 8 German Centers for Health Research
- 1 Synergy Grant, 2 Advanced Grants, 6 Consolidator Grants, 9 Starting Grants by the European Research Council (ERC)
- 7 coordinated EU, BMBF and Bavarian network projects
- 9 coordinated doctoral and clinician scientist programs
- 4 G-BA Innovation Fund projects

Gottfried Wilhelm Leibniz Prizes

- Prof. Dr. Erika von Mutius (2013)
- Prof. Dr. Christoph Klein (2010)
- Prof. Dr. Magdalena Götz (2007)
- Prof. Dr. Peter B. Becker (2005)
- Prof. Dr. Christian Haass (2002)

High impact publications of the past five years

Journal	Impact factor 2023	Number of publications 2019 to 2023
Lancet	98.4	45
New England Journal of Medicine	96.2	47
Nature Reviews Disease Primers	76.9	11
Nature Medicine	58.7	31
Annals of Oncology	56.7	37
Nature	50.5	35
Lancet Neurology	46.5	42
Cell	45.5	20
Science	44.7	17
Lancet Diabetes & Endocrinology	44.0	17
Journal of Clinical Oncology	42.1	38
Lancet Oncology	41.6	25
European Heart Journal	37.6	75
Circulation	35.5	31
Nature Genetics	31.7	34
Journal of Hematology & Oncology	29.5	15
Cell Metabolism	27.7	13
Intensive Care Medicine	27.1	11

Selected journals with impact factor > 27 and ≥ 10 publications

German Strategy for Excellence ("Exzellenzstrategie")*

Synergy – Munich Cluster for Systems Neurology (since 2012 – Prof. Dr. Dr. C. Haass)

DFG (Collaborative Research Centers, Graduate Colleges and Research units)*

SFB 1123 – Atherosclerosis – Mechanisms and networks of novel therapeutic targets (since 2014 – Prof. Dr. C. Weber)

SFB 1064 – Chromatin dynamics (since 2013 – Prof. Dr. P. Becker)

TRR 152 – Maintenance of body homeostasis by TRP channel modules (since 2014 – Prof. Dr. T. Gudermann)

GRK 2621 – Predictors and outcomes in primary depression care (since 2021 – Prof. Dr. J. Gensichen)

GRK 2338 – Targets in toxicology – deciphering therapeutic targets in lung toxicology (since 2018 – Prof. Dr. T. Gudermann)

FOR 5621– OCU-GT – Adressing the unmet needs in ocular gene therapy (since 2024 – Prof. Dr. S. Michalakis)

FOR 2879 – ImmunoStroke – From immune cells to stroke recovery (since 2019 – Prof. Dr. A. Liesz)

German Centers for Health Research („DZG")

DKTK – German Cancer Consortium (LMU speaker: Prof. Dr. Dr. M. von Bergwelt)

DZD – German Center for Diabetes Research (LMU speaker: Prof. Dr. E. Wolf)

DZHK – German Center for Cardiovascular Research (LMU speaker: Prof. Dr. C. Weber)

DZIF – German Center for Infection Research (LMU speaker: Prof. Dr. M. Hoelscher)

DZKJ - German Center for Child and Adolescent (LMU speaker: Prof. Dr. Dr. C. Klein)

DZL – German Center for Lung Research (LMU speaker: Prof. Dr. A. Ö. Yildirim)

DZNE – German Center for Neurodegenerative Diseases (LMU speaker: Prof. Dr. Dr. C. Haass)

DZPG - German Center for Mental Health (LMU speaker: Prof. Dr. P. Falkai

BMBF*

UNITE4TB – United innovation and treatment for tuberculosis (2021 to 2028 – Prof. Dr. M. Hölscher)

CLINSPECT-M – Clinical mass spectrometry center Munich (2020 to 2026 – Prof. Dr. D. Teupser)

DIFUTURE – Data integration for future medicine (2018 to 2026 –Prof. Dr. U. Mansmann)

Bavarian Research Consortia

BZKF – Bavarian Center for Cancer Research (LMU representatives: Prof. Dr. C. Belka, Prof. Dr. F. Klauschen, Prof. Dr. L. von Baumgarten)

BAYCELLator – The Bavarian cell therapy catalyst (2023 to 2026 – Prof. Dr. S. Kobold)

G-BA Innovation Fund*

KIDS (2024 to 2027 – Prof. Dr. F. Schwendicke)

WELCOME (2023 to 2026 – Prof. Dr. U. Fischer)

PARTNER (2022 to 2025 – Prof. Dr. T. Dreischulte)

OptiNIV (2021 to 2025– Prof. Dr. A. Bender)

European Union*

BiotaBB – Modulation of brain barrier function (2023 to 2026 – C. Benakis, PhD)

VasOX – Role of oxidative stress for neuro-vascular function (2023 to 2026 – Prof. Dr. N. Plesnila)

IMMOSCAN – The role of immuneosteoclasts in cancer (2022 to 2025 – Prof. Dr. H. Taipaleenmäki)

* with speaker or coordinator function at LMU

European Research Council (ERC)

Synergy Grant

MicroClock – The bacillus subtilis circadian clock (2025 to 2030 – Prof. Dr. M. Merrow)

Advanced Grant

APROSUS – Microbiome-derived asthma and allergy protective substances for prevention (2023 to 2027 – Prof. Dr. E. von Mutius)

Advanced Grant

NeuroCentro – Novel mechanisms of neurogenesis (2020 to 2025 – Prof. Dr. M. Götz)

Consolidator Grant

IMPROVE_LIFE – Investigate maternal and paternal risk factors (2024 to 2029 – Prof. Dr. H. Stöckl)

Consolidator Grant

CATACLIS – Cancer tailored nextgeneration cellular therapies (2024 to 2029 – Prof. Dr. S. Kobold)

Consolidator Grant

switchDecoding – Decoding the path to cellular variation within pathogen populations (2023 to 2028 – Prof. Dr. N. Siegel)

Consolidator Grant

ExoDevo – Extracellular vesicles-mediated cross-talk during human brain development and disease (2023 to 2027 – Prof. Dr. S. Capello)

Consolidator Grant

Calvaria – Translational aspects of the discovery of skull marrow-meninges connections (2021 to 2025 – Prof. Dr. A. Ertürk)

Consolidator Gran

EvoGutHealth – Evolution of gut-associated microbial communities (2020 to 2025 – Prof. Dr. B. Stecher)

Starting Grant

ARISE – Activate repair in stroke (2024 to 2029 – Prof. Dr. Dr. A. Wahl)

Starting Grant

PHAGE-PRO – Advancing phage therapy through synergistic strategies (2024 to 2029 – Prof. Dr. C. Wendling)

Starting Grant

OMEGA - Overcoming monocyte complexity in pulmonary fibrosis progression (2024 to 2029 – Dr. I. Fernandez)

Starting Grant

MEKanics – Cell mechanics of megakaryocytes in 3D tissues (2024 to 2028 – Prof. Dr. F. Gärtner)

Starting Grant

EpiCblood – Towards early cancer detection and tumor classification (2024 to 2028 – Dr. R. Villaseñor)

Starting Grant

ImmGenDC– Dissecting the context-specificity of genetic immune regulation in plasmacytoid dendritic cells (2023 to 2028 – Dr. S. Kim-Hellmuth)

Starting Grant

oxDOPAMIN – Unraveling the mystery of preferential degeneration of midbrain neurons (2021 to 2026 – Prof. Dr. L. Burbulla)

Starting Grant

T-MEMORE – Thrombotic memory-linking a break in tolerance to platelets to re-thrombosis (2020 to 2025 – Prof. Dr. K. Stark)

Starting Grant

Neuroprecise – Precision medicine in traumatic brain injury (2019 to 2026 – Prof. Dr. I. Koerte)

Doctoral Programs, Clinician Scientist Programs*

Marie Curie Doctoral Network – T-RAFIC – Training network for tracking and controlling therapeutic immune cells in cancer (2025 to 2029 – Prof. Dr. S. Kobold)

Marie Curie Doctoral Network – SHARE-CTD – Sharing and re-using clinical trial data to maximise impact (2024 to 2027 – Prof. Dr. U. Mansmann)

Else Kröner-Fresenius Clinician Scientist Program –Transplantation medicine – strategies for ex vivo repair of donor livers and kidneys (2023 to 2026 – Prof. Dr. C. Lange)

Else Kröner-Fresenius Clinician Scientist Program – Immuno-oncology and local intervention (2022 to 2025 – Prof. Dr. S. Kobold)

Else Kröner-Fresenius "Promotionskolleg"– FöFoLe Inflammation (2021 to 2027 – Prof. Dr. H. Anders)

Marie Curie Doctoral Network – T-OP – Training network for optimizing adoptive T-cell therapy of cancer (2021 to 2025 – Prof. Dr. S. Kobold)

PRIME – Clinician scientist program in vascular medicine (2018 to 2025 – Prof. Dr. S. Massberg)

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References: Annual report 2023, EvaLuna 2015, 2017, 2019, 2021, 2023, DFG, EU, BMBF, Else Kröner-Fresenius Stiftung, G-BA

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