

# Fact Sheet Research

2020





## Campus City Center

The University Hospital of Ludwig-Maximilians-Universität München (LMU) 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. The **Departments of Psychiatry and Psychotherapy (1)** saw the works of Alois Alzheimer and Emil Kraepelin where Alzheimer's disease was first described. Founded in 1913 as a royal hospital for obstetrics and gynecology the **Department of Obstetrics and Gynecology** in Maistraße (2) has seen the births of many inhabitants of Munich. The **Dr. von Hauner Children's Hos-**

**pital (3)** was founded in 1846. Other departments of the University Hospital at the Campus City Center include the **Departments of Surgery (4), Internal Medicine (5), Radiology and Nuclear Medicine (6), Radiation Oncology (7), Dental Medicine (8), Oral and Maxillofacial Surgery and Facial Plastic Surgery (9), Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy (10), Ophthalmology (11), Otorhinolaryngology (12) and Dermatology and Allergy (13)**. Currently, a modern interdisciplinary „Portalklinik“ (14) with 200 patient beds is constructed next to the historic main buil-

ding. Opening in 2020 it will provide high-end medicine in the city center for generations of patients to come. The **Max von Pettenkofer Institute (15)** is named after Max Joseph von Pettenkofer, the scientific founder of modern city sanitation and hospital hygiene. The **Institute of Pathology** in Thalkirchner Straße (16) is in function since 1930. Other preclinical institutes of the Medical Faculty include the **Institutes of Anatomy (17), Medical Psychology (18), Pharmacology and Toxicology (19), Ethics History and Theory of Medicine (20), Legal Medicine (21) and Physiology (22)**.



## 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 1,203 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 Medical Faculty. Together, these buildings form the heart of the University Hospital Campus Großhadern. The Campus will be completely rebuilt, together with a new **Center for Pediatrics (4)**, in the coming

20 years. 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)**. A new joint building (6) will host both **Microbiological and Virology Diagnostics and Cardiovascular Research** which currently shares a building with **Pathology (7)**. The **Gene Center (8), BioSysM, the Center for Molecular Biosystems (9), and the Faculty of Chemistry and Pharmacy (10)** are strong partners in research and teaching. At the Western border of the Campus Großhadern, separated by some sports field and forest,

lies the **Biomedical Center (11)** of the Medical Faculty, the LMU Biocampus Martinsried housing the **Faculty of Biology (12), the Startup Campus (13) and the Max Planck Institutes for Neurobiology (14) and Biochemistry (15)**. Together, the institutions and startup companies at Campus Großhadern and Martinsried form one of the largest and most active biomedical clusters in Europe.

## Faculty of Medicine

The Faculty of Medicine and the University Hospital of Ludwig-Maximilians-Universität in Munich are among European's leading centers of scholarly 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 six national centers for health research (cancer research, lung research, infection research, cardiovascular research, diabetes research and neurodegenerative diseases research). These centers reflect the foci of medical research that are actively pursued in Munich, from 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. The faculty is speaker of six nationally supported Collaborative Research Centers („Sonderforschungsbereiche“) by the German Research Foundation (DFG). It hosts four Advanced Grants, four Consolidator Grants and six Starting Grants by the European Research Council (ERC) and coordinates ten national and european projects.



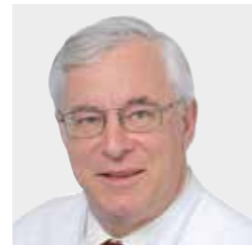
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## University Hospital

Thanks to its achievements in research, teaching and patient care, the University Hospital enjoys an excellent reputation both nationally and internationally. Our 10,367 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, 49 interdisciplinary centers offer individual medical care. Interdisciplinary collaboration of experts from different medical areas enables efficient diagnosis and therapy. Around 500,000 patients are treated annually at both locations, the Campus City Center and the Campus Großhadern. With 1,964 beds, the University Hospital provides high standards of diagnosis, treatment and nursing, and is, next to the Charité in Berlin, the second largest university hospital in Germany. The University Hospital receives an annual research and teaching budget of 145 million Euro from the state of Bavaria. The Ludwig-Maximilians-Universität and the University Hospital secure additional annual third-party funding of over 29 million and 97 million Euro per year, respectively.

## Facts and figures



### University Hospital

- 48 departments
- 49 interdisciplinary centers
- 10,367 staff members
- 442,342 out-patients
- 1,964 in-patient beds
- 97 Mio Euro annual third-party funding
- 2,954 publications, cumulative impact 15,578 (JIF)



94,321 in-patients



1,798 doctors



3,280 nursing staff



### Faculty of Medicine

- 14 basic science and preclinical institutes
- 1,670 staff members
- 603 scientific staff
- 889 non-scientific staff
- 48 habilitations
- 29 Mio Euro annual third-party funding
- 461 publications, cumulative impact 2,871 (JIF)



178 professors



521 PhD graduations



6,911 students

## Academic excellence

### Research consortia

- 1 cluster of excellence
- Speaker of 6 nationally funded Collaborative Research Centers
- 6 german centers for health research
- European Reserach Council (ERC): 4 Advanced Grants, 4 Consolidator Grants, 6 Starting Grants
- 10 coordinated EU- and BMBF network projects
- 11 graduate and research colleges

### Gottfried Wilhelm Leibniz Prizes


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

### High impact publications of the past five years


Journal name	Impact factor 2017	Number of publications 2014-2018
New England Journal of Medicine	79,3	66
The Lancet	53,3	48
Journal of the American Medical Association	47,7	12
Nature	41,6	28
Lancet Oncology	36,4	38
Nature Medicine	32,6	13
Cell	31,4	25
Lancet Neurology	27,1	20
Nature Genetics	27,1	47
Journal of Clinical Oncology	26,3	41
European Heart Journal	23,4	51
Cancer Cell	22,8	17
Lancet Respiratory Medicine	21,5	16
Gastroenterology	20,8	25

Selected journals with impact factor >20 and at least 10 publications

## DFG (Collaborative Research Centers and Graduate Colleges)

-  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)
-  SFB 1054 – Control and plasticity of cell-fate decisions in the immune system (since 2013 – Prof. Dr. T. Brockner)
-  SFB 914 – Trafficking of immune cells in inflammation, development and disease (since 2011 – Prof. Dr. B. Walzog)
-  TRR 152 – Maintenance of body homeostasis by TRP channel modules (since 2014 – Prof. Dr. T. Gudermann)
-  TRR 127 – Biology of xenogeneic cell and organ transplantation – from bench to bedside (since 2012 – Prof. Dr. B. Reichart, Prof. Dr. E. Wolf)
-  GRK 2338 – Targets in Toxicology - Deciphering Therapeutic Targets in Lung Toxicology (since 2018 – Prof. Dr. T. Gudermann)
-  GRK 2274 – Advanced medical physics for image-guided cancer therapy (since 2017 – Prof. Dr. K. Parodi)


## German Strategy for Excellence („Exzellenzstrategie“)

-  Synergy – Munich cluster for systems neurology (since 2012 – Prof. Dr. C. Haass)




## German Centers for Health Research („Deutsche Gesundheitszentren“)

-  DKTK – German Cancer Consortium (LMU Speaker: Prof. 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)
-  DZL – German Center for Lung Research (LMU Speaker: Prof. Dr. E. von Mutius)
-  DZNE – German Center for Neurodegenerative Diseases (LMU Speaker: Prof. Dr. C. Haass)















## Integrated Research and Treatment Center

-  DSGZ – German Center for Vertigo and Balance Disorders (Prof. Dr. T. Brandt)










## Graduate and Research Colleges

-  Marie Curie ITN – Cell2Cell heterogeneity (2019 to 2023 – Dr. S. Braun, Prof. Dr. T. N. Siegel)
-  PRIME – Clinician scientist program in vascular medicine (2018 to 2021 – Prof. Dr. S. Massberg)
-  Marie Curie ITN – Chromatin and metabolism (ChroMe) (2016 to 2020 – Prof. Dr. A. Ladurner)
-  Else Kröner-Fresenius Clinician Scientist Program – Cancer immunotherapy (2017 to 2023 – Prof. Dr. M. Subklewe)
-  Else Kröner-Fresenius Clinician Scientist Program – Translational psychiatry (2017 to 2023 – Prof. Dr. P. Falkai)
-  Marie Curie ITN – Training network for the immunotherapy of cancer (IMMUTRAIN) (2015 to 2020 – Prof. Dr. S. Endres)
-  Else Kröner-Fresenius Clinical Research School – Rare Immune system diseases (2014 to 2021 – Prof. Dr. C. Klein)
-  Elite Network of Bavaria – Immunotargeting of cancer (i-Target) (2014 to 2022 – Prof. Dr. S. Endres)
-  Elite Network of Bavaria – Scientific reasoning and argumentation (REASON) (2013 to 2020 – Prof. Dr. F. Fischer)

## European Research Council (ERC)

-  ImmunoThrombosis – Cross-talk between platelets and immunity – implications for host homeostasis and defense (2019 to 2024 – Prof. Dr. S. Massberg)
-  Tolerance Footprint – Clonal deletion versus clonal diversion: Footprints of self-tolerance in the T-cell repertoire (2017 to 2022 – Prof. Dr. L. Klein)
-  PAPA – Pathophysiology of primary aldosteronism (2017 to 2021 – Prof. Dr. M. Reincke)
-  PROVASC – Cell-specific vascular protection by CXCL12/CXCR4 (2016 to 2021 – Prof. Dr. C. Weber)
-  Calvaria – Translational aspects of the discovery of skull marrow-meninges connections (2019 to 2024 – Dr. A. Ertürk)
-  EvoGutHealth – Evolution of gut-associated microbial communities and its functional relevance in health and disease (2019 to 2024 – Prof. Dr. B. Stecher)
-  SIRMIO – Small animal proton irradiator for research in molecular image-guided radiation-oncology (2017 to 2021 – Prof. Dr. K. Parodi)
-  LeukaemiaTargeted – Selecting genetic lesions with essential function for patients' leukaemia in vivo as targets for precision medicine (2016 to 2021 – Prof. Dr. I. Jeremias)
-  Proteofit – Adapting protein fate for muscle function and fitness (2020 to 2025 – Prof. Dr. A. Bartelt)
-  Neuroprecise – Precision medicine in traumatic brain injury using individual neurosteroid response (2019 to 2024 – Prof. Dr. I. Koerte)
-  RecoverInFlame – T-cell-driven inflammatory mechanisms promote recovery after acute brain injury (2018 to 2023 – PD Dr. A. Liesz)
-  ARMOR-T – Armoring multifunctional T-cells for cancer therapy (2018 to 2023 – Prof. Dr. S. Kobold)
-  Baby DCs – Age-dependent regulation of dendritic cell development and function (2017 to 2022 – Prof. Dr. B. Schraml)
-  CIRCODE – Cell-type specific mechanisms regulating rhythms in leukocyte homing (2015 to 2020 – Dr. C. Scheiermann)

## EU and BMBF

-  MOBISTAR – Mobilization of people in need of intensive care through a new standard in adaptive robotics (2020 to 2023 – Dr. U. Fischer)
-  RESPONSE – Adaptation and clinical use of existing robotic systems to relieve caregivers from non-occupational activities (2020 to 2023 – Dr. U. Fischer)
-  mitoNET – German network for mitochondrial diseases (2019 to 2022 – Prof. Dr. T. Klopstock)
-  TRACE – Transfer of multivirusspecific T-cells following transplantation (2018 to 2022 – Prof. Dr. T. Feuchtinger)
-  ComAir – Investigation of cabin ventilation strategies impact on aircraft cabin air quality and passengers comfort (2018 to 2020 – Dr. B. Herbig)
-  CHAMP – Childhood allergy and tolerance – biomarkers and predictors (2017 to 2021 – Prof. Dr. B. Schaub)
-  DIFUTURE – Data integration for future medicine (2018 to 2021 – Prof. Dr. U. Mansmann)
-  Mobile-Net – Enabling participation by enabling mobility in older adults (2017 to 2020 – Prof. Dr. E. Grill)
-  REPIMPACT – Repetitive subconcussive head impacts (2017 to 2020 – Prof. Dr. I. Koerte)
-  SVDs-at-target – Small vessel diseases in a mechanistic perspective (2016 to 2020 – Prof. Dr. M. Dichgans)

## Ludwig-Maximilians-Universität München

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References: Annual report 2018, Evaluna 2018, DFG, EU, Else Kröner-Fresenius  
Stiftung, Elitenetzwerk Bayern

Picture Credit: LMU Klinikum, LMU, IZB GmbH / Luftbildverlag Bertram GmbH (aerial view Campus Großhadern)

