

Life Sciences - Research Consortia and Clusters of Excellence (Selection)

This selection of research consortia and clusters provides a first insight into research in the life sciences at universities in Bavaria. They are of special interest to early-career researchers as they often create excellent training and career opportunities and provide access to specialized resources and networks. The funding schemes of the German Research Foundation (DFG) listed here focus on strengthening the specific research profiles of the universities or on supporting pioneering research in emerging fields.

Clusters of Excellence (EXC) are large, cutting-edge research projects funded by the German “Excellence Strategy.” They aim to strengthen university research profiles in internationally competitive fields and are funded for a period of seven years which can be extended.

Collaborative Research Centers (CRC) are long-term university-based research consortia established for up to 12 years in which researchers work together within a multidisciplinary research program. CRCs consist of a large number of projects, allowing researchers to tackle complex and long-term research topics. They also enable universities to strengthen their research profile and promote structural development.

Transregios (TRR) are Collaborative Research Centers in which up to three universities collaborate with each other.

Research Units (FOR) promote close collaboration between outstanding scientists working on a specific question. Funding aims to provide the required personnel and material resources for a medium-term cooperation, usually designed to last eight years. Research units often contribute to establishing new directions in research and can serve as a springboard for larger projects such as collaborative research centers.

Priority Programs (SPP) receive funding for a period of six years. They have a programmatic focus and the purpose of advancing knowledge in an emerging field of research through collaborative networked support. They are thus characterized by the use of new methods and forms of collaboration. One program can consist of up to 30 individual subprojects located at several institutions across Germany.

Graduate Training Groups and other PhD Opportunities

For information on PhD programs in Bavaria and ways to finance your doctorate visit

<https://www.research-in-bavaria.de/apply-for-a-phd> and <https://www.research-in-bavaria.de/phd-programs>

You may also find useful information on living and working in Bavaria at www.research-in-bavaria.de.



Life Sciences

| No. | Project | Speaker | Start | Link |
|---------------|--|--------------------|-------|--|
| FOR 2830 | Advanced Concepts in Cellular Immune Control of Cytomegalovirus | Lars Dölken | 2019 | www.virologie.uni-wuerzburg.de/forschungsverbuende/for2830/home/ |
| SFB 1123 | Atherosclerosis - Mechanisms and Networks of Novel Therapeutic Targets | Christian Weber | 2014 | www.sfb1123.med.uni-muenchen.de/index.html |
| SFB 1525 | Cardio-immune Interfaces | Stefan Frantz | 2022 | www.ukw.de/forschung-lehre/sfb-1525/startseite/ |
| FOR 5235 | Cereal Stem Cell Systems (CSCS): Establishment, Maintenance and Termination | Thomas Dresselhaus | 2021 | gepris.dfg.de/gepris/projekt/448353073?language=en |
| CRC / TRR 147 | Cellular Communication in the Stroma of Colorectal Cancer: From Pathophysiology to Clinical Translation | Markus F. Neurath | 2026 | www.fau.eu/2025/06/news/fau-achieves-success-with-two-collaborative-research-centers/ |
| SFB 1181 | Checkpoints for Resolution of Inflammation | Georg Schett | 2015 | www.sfb1181.forschung.fau.eu/ |
| TRR 274 | Checkpoints of Central Nervous System Recovery | Mikael Simons | 2020 | www.sfb274.de/en |
| SFB 1309 | Chemical Biology of Epigenetic Modifications | Thomas Carell | 2018 | sfb1309.de/ |
| SFB 1064 | Chromatin Dynamics | Peter Becker | 2013 | www.sfb1064.med.uni-muenchen.de/index.html |
| FOR 5560 | Crosstalk between B cell metabolism and signaling | Julia Jellusova | 2023 | web.tum.de/en/for5560/home/ |
| SFB 1583 | Decisions in Infectious Diseases | Thomas Rudel | 2023 | www.crc-decide.de/ |
| TRR 369 | Degeneration of bone induced by inflammation (DIONE) | Aline Bozec | 2024 | www.trr369-dione.de/ |
| SFB 1483 | Empatho-Kinaesthetic Sensor Technology – Sensor Techniques and Data Analysis Methods for Empatho-Kinaesthetic Modeling and Condition monitoring | Martin Vossiek | 2021 | www.empkins.de/about/overview-of-project-areas/ |
| FOR 5375 | Enhancing the structural diversity between patches for improving multidiversity and multifunctionality in production forests (BETA-FOR) | Jörg Müller | 2022 | www.uni-wuerzburg.de/for5375/ |
| FOR 2407 | Exploring Articular Cartilage and Subchondral Bone Degeneration and Regeneration in Osteoarthritis (ExCarBon) | Susanne Grässel | 2016 | www.excarbon.com/ |
| SFB 1540 | Exploring Brain Mechanics (EBM): Understanding, engineering and exploiting mechanical properties and signals in central nervous system development, physiology and pathology | Paul Steinmann | 2023 | www.crc1540-ebm.research.fau.eu/ |

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| FOR 5534 | Fast Mapping of Quantitative MR-biosignatures at Ultra-high Magnetic Field | Armin Nagel | 2023 | www.dfg-for5534-mr-biosignatures.forschung.fau.de/ |
| SPP 2306 | Ferroptosis: from Molecular Basics to Clinical Applications | Marcus Conrad | 2021 | www.dfg-ferroptosis.net/ |
| TRR 225 | From the fundamentals of biofabrication towards functional tissue models | Jürgen Groll | 2018 | trr225biofab.de/de/ |
| TRR 387 | Functionalizing the Ubiquitin System against Cancer - UbiQance | Florian Bassermann | 2024 | ubiqancer.de/ |
| TRR 356 | Genetic diversity shaping biotic interactions of plants (PlantMicrobe) | Martin Parniske | 2023 | www.plantmicrobe.de/ |
| ----- | How does the Venus flytrap “count”? – The molecular and evolutionary basis of frequency/dosedependent decision-making in the carnivorous Droseraceae family | Rainer Hedrich | 2019 | gepris.dfg.de/gepris/projekt/415282803 |
| FOR 5795 | HyperMet: Effects of skeletal muscle hypertrophy and atrophy on metabolic health | Henning Wackerhage | 2024 | web.tum.de/en/hypermet/home/ |
| KFO 5024 | Immune checkpoints of gut to brain communication in inflammatory and neurodegenerative diseases (GB.Com) | Beate Winner | 2023 | www.kfo5024.med.fau.de/ |
| TRR 241 | Immune-Epithelial Communication in Inflammatory Bowel Diseases | Christoph Becker | 2018 | transregio241-en.webspace.rrze.de/ |
| FOR 2879 | Immunostroke - From immune cells to stroke recovery | Arthur Liesz | 2019 | immunostroke.de/ |
| TRR 338 | LETSIMMUN - Lymphocyte Engineering for Therapeutic Synthetic Immunity | Dirk Busch | 2021 | letsimmun.de/ |
| TRR 152 | Maintenance of Body Homeostasis by Transient Receptor Potential Channel Modules (TRiPs to Homeostasis) | Thomas Gudermann | 2014 | www.sfb-trr152.med.uni-muenchen.de/index.html |
| SFB 1371 | Microbiome Signatures - Functional Relevance in the Digestive Tract | Dirk Haller | 2019 | www.sfb1371.tum.de/ |
| SFB 1357 | MICROPLASTICS - Understanding the mechanisms and processes of biological effects, transport and formation: From model to complex systems as a basis for new solutions | Christian Laforsch | 2019 | www.sfb-mikroplastik.uni-bayreuth.de/en/index.html |
| TRR 221 | Modulation of graft-versus-host and graft-versus-leukemia immune responses after allogeneic stem cell transplantation | Wolfgang Herr | 2018 | www.gvhgvl.de |
| FOR 5424 | Modulation of olfaction: how recurrent circuits govern state-dependent behaviour | Veronica Egger | 2021 | www.modolfor.de/ |
| TRR 392 | Molecular evolution in prebiotic environments | Dieter Braun | 2024 | www.molecular-evolution.de/index.html |

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| TRR 267 | Non-coding RNA in the cardiovascular system | Stefan Engelhardt | 2019 | cardiovascular-ncrna.de/ |
| TRR 237 | Nucleic Acid Immunity | Veit Hornung | 2018 | www.trr237.uni-muenchen.de/index.html |
| EXC 3113 | Nucleic Acid Sciences and Technologies – NUCLEATE | Veit Hornung | 2026 | www.lmu.de/en/newsroom/news-overview/news/nucleate-cluster-of-excellence-beacon-of-nucleic-acid-research.html |
| FOR 5621 | OCU-GT: Addressing the Unmet Needs in Ocular Gene Therapy | Stylios Michalakis | 2024 | www.for5621.de/for5621 |
| FOR 2886 | PANDORA – Pathways triggering Autoimmunity and Defining Onset of early Rheumatoid Arthritis | Gerhard Krönke | 2019 | www.pandora.for2886.research.fau.eu/ |
| KFO 5001 | Peripheral mechanisms of pain and their resolution | Claudia Sommer | 2020 | www.ukw.de/en/clinical-research-unit-kfo-5001/homepage/ |
| FOR 5298 | Personalized diagnostics for the treatment of obesity (iMAGO) | Markus Klingenspor | 2022 | www.imago-for5298.de/ |
| SPP 2332 | Physics of Parasitism | Markus Engstler | 2021 | www.uni-wuerzburg.de/forschung/physics-of-parasitism/ |
| FOR 2858 | Role of translocator protein (18 kDa) (TSPO) as a diagnostic and therapeutic target in the nervous system | Rainer Rupprecht | 2019 | www.uni-regensburg.de/research/for-2858/startseite/index.html |
| TRR 305 | Striking a moving target: From mechanisms of metastatic organ colonisation to novel systemic therapies | Christoph Klein | 2021 | www.trr305.de/en/ |
| EXC 2145 | SyNerGy – Munich Cluster for Systems Neurology | Christian Haass, Thomas Misgeld | 2019 | www.synergy-munich.de/synergy |
| FOR 2332 | Temperature-related stresses as a unifying principle in ancient extinctions (TERSANE) | Wolfgang Kießling | 2016 | cnidaria.nat.uni-erlangen.de/wp/ |
| TRR 175 | The Green Hub - Central Coordinator of Acclimation in Plants | Dario Leister | 2016 | www.tr175.bio.lmu.de/ |
| TRR 374 | Tubular system and interstitium of the kidney: (Patho-) physiology and cross-talk | Mario Schiffer | 2023 | gepris.dfg.de/gepris/projekt/509149993?language=en |

Footnotes

Programs funded by DFG (Deutsche Forschungsgemeinschaft / German Research Foundation).

Research activities are integrated into a larger research network and may involve researchers from different chairs, departments or universities.

FOR - Forschergruppe / Research Unit

KFO - Klinische Forschergruppe / Clinical Research Unit

SFB - Sonderforschungsbereich / Collaborative Research Centre, CRC

SPP - Schwerpunktprogramme / Priority Programme

TRR - Sonderforschungsbereich/Transregio / Collaborative Research Centre/Transregio, TRR