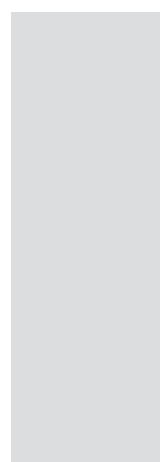


# INFORMATION



EGF



Forschungsgemeinschaft Funk e.V.  
Research Association for Radio Applications



### Aim

The Forschungsgemeinschaft Funk (FGF) was founded in 1992 as a non-profit organization, with the objective to investigate potential environmental effects of electromagnetic fields by scientific methods and to actively promote the provision of objective information on the state of the art of science in this field. The various activities conducted by the FGF are exclusively financed from member fees and donations.

### Research promotion

- Funding of scientific studies for the investigation of possible biological effects of electromagnetic fields. The focus is on investigating low-intensity radiofrequency fields as used by modern radio technologies.
- Literature reviews for a qualified assessment of the present state of knowledge.
- International workshops on analysis, evaluation and discussion of current results in selected research fields.
- Supporting the development of a scientific literature database ([www.emf-portal.de](http://www.emf-portal.de))

Project selection is based on the research agendas of national and international expert groups and is done independently by external scientists.

### Information

In its print and online media the FGF informs about results of its scientific studies, the state of the art of international research and the societal debate about the topic of environmental electromagnetic compatibility (EMCE).

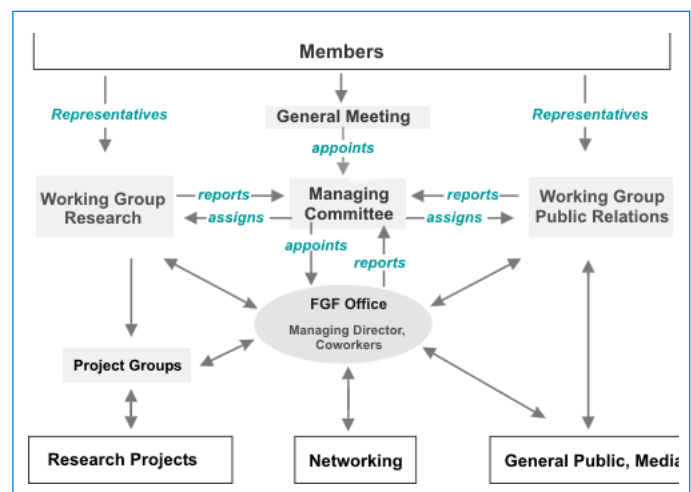
- **website [www.fgf.de](http://www.fgf.de):** Internet platform with a broad spectrum of information about research and the social dialogue on electromagnetic fields (EMF). Download and subscription of all FGF publications. <http://www.fgf.de/english/publications/index.html>
- **Infoline:** Weekly electronic bulletin with news from research, society, technology and law, as well as events calendar
- **Newsletter:** Quarterly magazine with authors' contributions on study results, meeting reports and current issues around the topic EMCE

- **Edition Wissenschaft:** Comprehensive presentation of special topics related to EMCE
- **Annual report:** Information on member development, financial budget, research results, activities, cooperations

All publications are available on the FGF's website; subscription is free.

### National and international cooperation

The FGF participates in activities of the European Commission, the World Health Organisation (WHO) and many other bodies and scientific associations. The FGF has



established itself as an important link between science, industry, authorities and public.

### National and international members

Members include mobile manufacturers, network operators and other industries, the Federal Ministry of Economics and Technology, national public television, associations and research institutions. Membership is principally open to any association interested in the topic. This also refers to universities, research institutes, associations and citizen initiatives, as well as companies.

Extensive information on the FGF's website.



## Members

### Telecommunications and network infrastructure

- T-Mobile Deutschland GmbH
- E-Plus Mobilfunk GmbH & CoKG
- Vodafone D2 GmbH
- Telefónica O2 Germany GmbH & Co. OHG
- France Telecom - FT Orange

### National public television

- ARD
- ZDF

### Industry

- Ericsson Telefonaktiebolaget LM
- Huawei Technologies GmbH
- Kathrein-Werke KG
- Motorola GmbH

### Authorities

- Federal Ministry of Economics and Technology
- Federal Office for Communications (OFCOM/BAKOM), Switzerland
- Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway

### Others

- German Working Committee for CB Emergency and Personal Radio (DAKfCBNF)
- German Amateur-Radio-Club e.V. (DARC)
- Swiss Technical University Zurich (ETH)
- University of Applied Sciences Berlin
- University of Applied Sciences Deggendorf
- University of Applied Sciences Dortmund
- University of Applied Sciences Kiel
- University of Applied Sciences Köln
- University of Applied Sciences Leipzig
- Distance Teaching University Hagen

- Forum Mobilkommunikation Vienna (FMK)
- Research Institute for Telecommunications Dortmund
- GMT Bergische-Universität-GH-Wuppertal
- Society for the Scientific Examination of Parasciences (GWUP)
- Humboldt University, Berlin
- University of Economics and Technology, Saarbrücken
- Institute for Occupational Research and Continuing Education (IABW)
- Institute for Mobile and Satellite Communication Techniques (IMST)
- Institute of Hygiene and Epidemiology, Warschau/ Polen
- Jacobs University Bremen gGmbH
- Austrian Research Center Seibersdorf
- PIOM Bordeaux
- Police Academy, Münster
- Aachen University of Technology (RWTH), Research Center for Bioelectromagnetic Interaction (femu)
- Technical University of Braunschweig, Research Association: Electromagnetic Compatibility of Biological Systems
- Technical University of Graz
- Technical University of Hannover
- Technical University of Ilmenau
- Technical University of Karlsruhe
- Technical University of München
- Universidad Politecnica de Madrid
- University of Dortmund
- Universität Mainz, Clinics of Psychiatry and Psychotherapy
- University of Montpellier, Section de Nimes, Laboratoire de Biophysique Médicale
- University of Rostock
- University of Stuttgart
- University of Witten-Herdecke

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## The FGF's research activity

The FGF promotes projects investigating biological effects of electromagnetic fields. The focus of research is on radiofrequency fields as are used by radio applications.

The spectrum of research projects ranges from molecules via cells layers to animal studies and human experiments. Further, studies on the development of exposure systems as well as investigations of influences on medical devices are promoted.

Besides the commissioning of laboratory studies, data collection and data analyses are a focus of the FGF's research work. An example is the promotion of the literature database of the Research Center for Electromagnetic Interaction of Aachen University (femu). Worldwide available scientific results are collected, analysed and prepared for the public and experts alike. Special relevance have expert workshops on current research topics organized by FGF. They are a platform for experts for closer discussion of current knowledge.

The characteristics of research promoted by the FGF are:

- independence of research
- closing knowledge gaps
- cooperation with other institutions (eg WHO, COST 281, EMF-Net) in planning research projects.

## What is the basis of project selection?

Study topics are clearly defined by the FGF. In selection, the FGF bases on

- the recommendations of the WHO Research Agenda
- the proposals of national and international governmental and expert groups
- activities and results of other institutions.

In a call for tender scientists are requested to submit project proposals for a study. The selection of a research proposal is done considering recommendations of external experts.

## How is independence of research guaranteed?

Research projects are commissioned only to acknowledged scientific institutions. They have to comply with the standards of the World Health Organisation (WHO). This

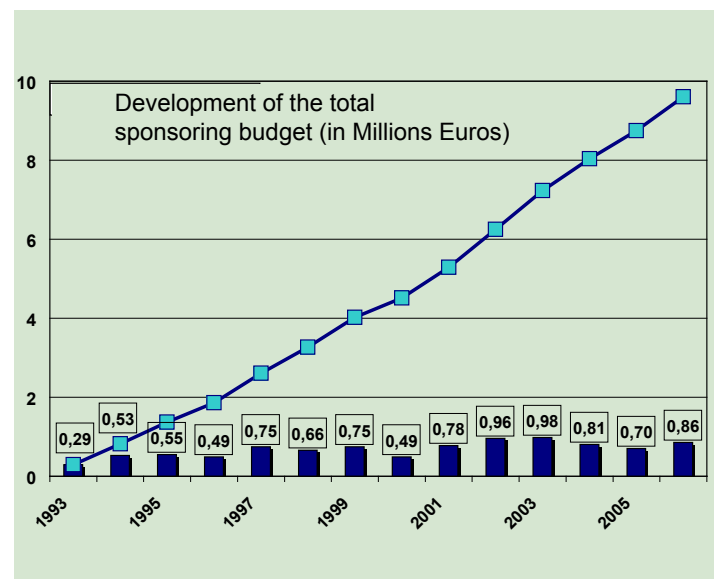
means that research results, among other things, shall be reproducible and sufficiently documented. It is already part of the projects agreement to submit the results to a scientific journal for publication.

All final reports and publications are made available to a broader public and put up for discussion. This is done by

- scientific colloquia on final results of a study
- the publication of results in peer-reviewed (ie reviewed by experts) scientific journals
- the publication in the FGF's media (Newsletter, Edition Wissenschaftt, internet pages)
- the inclusion of publications in different scientific database (eg the literature database of the FEMU in Aachen)
- workshops on the present state of knowledge about single research topics.

This method ensures a maximum of transparency and reproducibility for all research projects promoted by the FGF.

External experts are included in all phases of the project, in target definition, selection, study design as well as the acceptance of the final report.





## What results have been reached so far?

With more than 50 promoted studies with an overall financial budget of more than eight million euros, the FGF has made a substantial contribution to research in the field of biological effects of electromagnetic fields in 1992. The association's work and all research projects are exclusively financed from member fees and project commissions of the European Union.

Besides literature studies, eg giving an overview of special topics such as influences on the blood-brain barrier, melatonin hypothesis or long-term experimental studies with animals, a large number of laboratory studies was made possible. A survey list is found on the pages of the FGF's internet service under [http://www.fgf.de/english/research\\_projects/index.html](http://www.fgf.de/english/research_projects/index.html).

While these studies mainly are aimed at gaining knowledge, other projects were able to elevate the standard of quality of research. They included a „Guideline for experiments in biological systems“, and the definition of a standardized GSM and UMTS radio signal for research projects, enabling comparability of different studies performed in the field of mobile radio and their replication by other research teams. Substantial sums were spent for the development of an open access database which allows a very quick and easy search for scientific publications.

Several expert workshops on single topic foci (eg influences on the blood-brain barrier or cancer risk) explored and documented the state of the art of science. These workshops thus serve as a reference basis future projects in the respective fields. the reports are available on the internet at [http://www.fgf.de/english/research\\_projects/workshops.html](http://www.fgf.de/english/research_projects/workshops.html).

The FGF's work going beyond pure funding of laboratory studies is an essential contribution to the optimization of study methods and qualified review and evaluation of the present state of knowledge.

The FGF provides unlimited access to its competence to its members and to national and international bodies. Moreover it has largely contributed to the elevation of the quality of research studies commissioned by other agencies.

## Short Outline of the FGF Research Strategy

### 1. Financing

- Follow the WHO Research Agenda
- Consider research identified by
  - national governments and the EU
  - national and international expert groups
  - FGF members
- Fill gaps in knowledge
- Avoid duplication of studies and of concurrent research
- Check possibility of project funding with partners

### 2. Publication

- Make final reports and publications of FGF research contractors publicly available
- Disseminate information by FGF publications and services
- Support information sharing through database, e.g. Expert-Assessed Literature Data Base WBLDB established for FGF at FEMU/RWTH Aachen (<http://www.femu.de>)

### 3. Quality

- Oblige contractors to perform research satisfying GLP (good laboratory practice) and - if applicable - GCP (good clinical practice) requirements
- Ensure high scientific reputation of the contracted research team and the laboratory
- Require a sophisticated study design and protocol (including statistical pre- and post-analyses)

### 4. Credibility

- Define clear processes for the selection and management of FGF funded research projects and make it public
- Seek advice from independent senior researchers for
  - research topic identification
  - project selection process
  - result interpretation
- Make research results available for scientific review and for public information

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### Core tasks

One of the core tasks of the Forschungsgemeinschaft Funk (FGF) is to provide objective and comprehensive information about biological effects of electromagnetic fields on humans and environment. The focus of public relations work is on national and international research.

By its engagement, the Forschungsgemeinschaft Funk seeks to promote the dialogue between science and society and to comprehensibly present the complex topic of „**electromagnetic compatibility with the environment (EMCE)**“ also for non-scientists and interested lay persons, thereby fostering an objective public debate.

### Tools

With its offer of broad range of events and publications, the FGF addresses several target groups: scientists, experts, journalists, interested lay persons, and institutions as well as members. The most important tools of public relations work include:

**International workshops:** Preparation and organisation of scientific seminars and workshops on selected special topics. They serve to foster a dialogue between experts and the exchange of current scientific insight.

**Infoline:** Weekly electronic bulletin with news from research, society, technology and law, as well as an events calendar. Infoline addresses all persons interested in the topic, as well as journalists and decision makers at companies and institutions.

**Newsletter:** Quarterly magazine with authors' contributions on study results, meeting reports and current issues around the topic EMCE. The online edition is also available in English.

**Edition Wissenschaft:** Extensive presentation of studies promoted by the FGF. Completing the Newsletter, Edition Wissenschaft is a renown, high-quality knowledge archive for interested lay persons and experts.

**www.fgf.de:** Internet platform providing a broad spectrum of information. Download and free subscription of all FGF publications at: <http://www.fgf.de/english/publications/index.html>. The Homepage is the knowledge portal for all who want to quickly obtain information about the FGF's work and topics from research and science.



### Intranet for members

The system is the central and up-to-date information center for FGF members. Among other things, it offers fresh daily information on current developments.

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