# Science Policy News

## The German Federal Republic: Annual Report for 1989 of the Deutsche Forschungsgemeinschaft (DFG; German Research Association)

The DFG finances research projects in all fields of science. It strengthens cooperation among scientists and coordinates basic research through support from public funds. It advises public authorities and legislative bodies on matters of science, furthers relations between the scientific and economic communities and promotes cooperation between German and foreign scientists. Special attention is paid to the support of young scientists.

In 1989, the DFG had DM 1167 million at its disposal (1988: 1123 million). The federal government provided DM 707 million and the Länder (11 state governments) DM 450 million. DM 4.9 million were received from various foundations, DM 3.1 million came from the DFG's own income and DM 1.8 million from last year's budget. Most of the DFG funds were provided to finance university research. DM 498 million were granted for individual research projects, DM 261 million for priority programs, research units and central research facilities, DM 49 million for libraries, international relations and general promotion of scientific research, DM 349 million for the special collaborative programs, DM 15 million for the Heisenberg program, DM 13 million for the postdoctoral program, DM 30 million for the Leibniz program and DM 2 million for the Gerhard Hess program. The DFG grants support four major scientific fields: Humanities and Social Sciences (15.3%), Bio-Medical Sciences (35.4%), Natural Sciences (24.8%) and Engineering Sciences (24.5%). Environmental research was specially supported with DM 46 million, provided through several programs. 526 young scientists were awarded personal fellowships for research, training and habilitation (application for a faculty position) (DM 28 million). 213 Scholarships (DM 13 million) were granted in the postdoctoral program.

For those interested in applying for support, these are the five types of programs offered by the DFG:

- The *Normal Procedure:* Research projects requested by individuals, for one or two years, with extension possible.
- The *Priority Programs:* Financing and coordinating the work of several scientists at different locations for one common project, for up to five years.
- The *Research Units:* A small group of scientists working on one project at the same location can be supported up to five years.
- The *Special Collaborative Programs* are long-term research projects where scientists from different fields collaborate in a joint program.

Young scientists also have the possibility of applying to the *Heisenberg Program* which provides salaries for a period of three years. The new *Gerhard Hess Program* is for scientists under 33 years of age at the postdoctoral level with research experience. It does not provide salaries, but up to DM 0.2 million can be granted for research.

Those interested in applying to these programs should contact:

Deutsche Forschungsgemeinschaft
Kennedyallee 40
Postfach 20 50 04
D-5300 Bonn 2, FRG

## European Science Foundation: Network on Insect-Plant Interactions

The Network on Insect-Plant Interactions was approved for launching by the Executive Council in March 1990, with a budget of FF 615 000 for an initial two-year period (Phase 1).

*General description*

The direct interaction between the plant world and the animal kingdom is greatly influenced by the primary position of insects. They form by far the most important group of animals consuming living plant tissues and, by virtue of this, have been a major force throughout evolution in shaping and maintaining the appearance and chemical constitution of the present-day plant world. Insect-plant studies therefore have a key position in the biological subdiscipline of fundamental ecology. Knowledge of the principles governing insect-plant interactions exceeds the realm of pure scientific interest, because in-

sect herbivory poses an everlasting problem in agricultural production; the study of insect-plant relationships is therefore considered to represent 'the very heart of agricultural entomology'. The need to curtail the use of insecticides and to find more environmentally acceptable control measures is universally recognized and new ideas should be based on sound knowledge of insect-plant relationships.

Insect-plant interactions have received relatively little attention, probably because they require a concerted approach by botanists and zoologists. Until recently botany and zoology have traditionally been separate fields. There is increased awareness of the fact that the combined input from both disciplines may lead to the discovery of important new biological concepts as well as principles applicable to crop protection. Much may be gained for biology in general by promoting co-operation between these two groups of scientists.

A basic element in all insect-plant studies is the notion that insects are with only few exceptions highly selective in their food choice. Since this selectivity is manifest in any insect-plant system it requires special attention when elucidating the principles underlying these systems. Insect food selectivity is influenced by two sources of variability: it involves (a) variation in insect behaviour, and (b) qualitative and quantitative variation in plant constituents, rendering a plant more or less acceptable to insects. Behavioural variation and plant chemical variability are considered to be the most basic aspects of insect-plant relationships and have therefore been selected for concerted study.

*Phase 1 activities*

The activities of the Network will focus on problems concerning insect host plant detection and utilization on one hand, and plant chemistry and physiological responses to insect damage on the other. Within these general areas, special attention will be devoted to the following topics, which are considered particularly crucial to furthering our insight into insect-plant relationships: chemoreception in herbivorous insects; variability in feeding behaviour, variability of plant chemistry.

Four small, intensive workshops will be organized on the following topics:

(1) *Plant chemistry*. This meeting serves to establish and strengthen contacts between chemists and biologists, with special emphasis on phytochemistry. Topics to be discussed include: Which molecules are to be found in the plant? What are the dynamics of plant chemicals? What information on plant chemistry does the biologist need, and what can be provided by the chemist, and at what investment of manpower and money? Which limitations can be expected of the information to be collected by chemists?

(2) *Insect behaviour*. This meeting is meant to discuss the scientific basis and methodological pitfalls of insect behaviour analysis, especially in relation to host plant selection and insect performance. There is a need to analyse the sources of discrepancies in results obtained, since these may be partly due to differences in methods and techniques employed.

(3) *Variability*. One of the most striking, but hitherto largely neglected, aspects of insect behaviour as well as of the chemical composition of their host plants is interindividual variability. Since the interaction of such variations between the two organisms involved, i.e. insects and plants, determines to a large extent the dynamics of insect-plant relationships, it is a *conditio-sine-qua-non* to determine the nature, size and geographical distribution of the variability, in order to understand the role of e.g. biotypes, the development of insect-plagues, and evolutionary processes.

(4) *Specialization in herbivorous insects*. One of the basic questions in all theories of insect-plant associations concerns the degree of host plant specialization. It is not known why many insects are highly specialized and feed on only one or a few related host plant species, whereas others are polyphagous and thrive on many different plant species.

Further to the workshops, short (one-week) exchange visits of scientists are foreseen, to discuss scientific programmes and/or exchange experiences on methodological problems.

An open meeting will take place at the end of Phase 1 to discuss the extent to which the aims of the Network have been fulfilled, to evaluate the results of the scientific interactions, and to determine the scientific advances achieved. This meeting will also serve as a forum for planning future cooperation, identifying the best ways to consolidate scientific collaboration and agreeing on how to formalize the newly established scientific interactions.

Finally, to facilitate scientific exchange between researchers in this field it is planned to produce an inventory of European scientists active in the field of insect-plant relationships. It is also intended to produce a newsletter, to be circulated at regular intervals among scientists engaged in research in this field.

**Coordination Committee**

Professor L. M. Schoonhoven (Agricultural University, Wageningen, The Netherlands) (Chairman);
Professor W. M. Blaney (University of London, United Kingdom) (Secretary);
Professor G. Bergström (University of Göteborg, Sweden);
Dr. F. Camps (University of Barcelona, Spain);
Dr. R. Crnjar (University of Cagliari, Italy);
Professor W. Francke (University of Hamburg, Federal Republic of Germany);

Professor E. Haukioja (University of Turku, Finland);
Dr. T. Jermy (Hungarian Academy of Sciences, Hungary);
Dr. H. Mustaparta (University of Trondheim, Norway);
Dr. E. Städler (Eidgenössische Forschungsanstalt, Wädenswil, Switzerland);
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# Announcements

## Hungary

**3rd Congress of the European Society for Evolutionary Biology**

*Debrecen, Hungary, 2–6 September 1991*

Topics: The outcome of selection in non-trivial cases – Evolution in metapopulations – Coevolution – Palaeontological approaches to evolution – Molecular evolution – Developmental rules and evolution.

Organizers: Gerdienne de Jong, Utrecht
Pierre-Henri Guyon, Paris
Volker Loeschcke, Aarhus
Antoni Hoffman, Warsaw

## USA

Courses

**Methods of Immunologic Research and Diagnosis**
An at-the-bench laboratory training program

Offered by The Ernest Witebsky Center for Immunology, University at Buffalo, State University of New York, 2–14 June 1991. A two-week program consisting of daily practical laboratory exercises personally carried out by participants, accompanied by lectures, demonstrations and discussions. Open to individuals at the postdoctoral level, supervisory senior technologists and graduate students.

Contact James F. Mohn, M.D., Director, The Ernest Witebsky Center for Immunology, 301 Sherman Hall, Buffalo, NY 14214, USA.
Telephone A.C. 716 831-2848 or 831-2901, FAX: 716 831-3395. Inquiries should be received by 15 March 1991 to insure consideration for acceptance.

## USA

**International Meeting of the Electrophoresis Societies**
Washington, DC, 19–21 March 1991

**8th International Symposium on Preparative Chromatography**
Arlington, VA, 13–15 May 1991

**National Symposium on Planar Chromatography**
Somerset, NJ, 23–25 September 1991

**11th International Symposium on HPLC of Proteins, Peptides and Polynucleotides**
Washington, DC, 20–23 October 1991

For information on these meetings please contact:
Mrs Janet Cunningham, Barr Enterprises, P.O. Box 279, Walkersville, MD 21793, USA. Phone 301-898-3772; Fax 310-898-5596.