

## RESEARCH ETHICS

# Germany Gets in Step With Scientific Misconduct Rules

**BERLIN**—Five years after a major fraud scandal rocked the scientific establishment, Germany's universities are about to get their first binding standards of ethical research. Universities must implement the new rules by the end of this month or risk being ruled ineligible for grants from the country's main research funding body, the Deutsche Forschungsgemeinschaft (DFG).

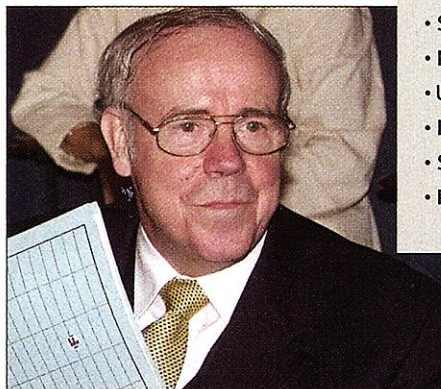
The rules follow international norms in defining scientific misconduct as "deliberate or grossly negligent falsification or fabrication of data." Other serious transgressions listed are deceit, plagiarism, and damage to the research of others. Possible sanctions include the loss of research contracts and the revocation of academic titles. Moreover, says DFG president Ernst-Ludwig Winnacker, "failure to cooperate with investigations will be considered an admission of guilt."

The regulations are a welcome tonic for a community embarrassed by misconduct inquiries that have dragged on for months or years and in some cases held little consequence for implicated individuals. The rules also try to ease the publish-or-perish pressures that, some argue, tempt young researchers to commit fraud. According to the new code, promotion decisions should no longer be based on quantitative measures—such as publication volume—but on quality and originality. "This is a crucial point, especially in clinical research," says Ulf Rapp, a cell biologist at the University of Würzburg.

The misconduct rules are the fruits of much soul-searching after a DFG-funded task force found falsification in dozens of papers authored by a pair of cancer researchers, Friedhelm Herrmann and Marion Brach (*Science*, 23 June 2000, p. 2106). A special DFG commission developed the regulations in consultation with international fraud experts. Any institution that receives DFG funding—meaning the vast majority of Germany's research centers and universities—has until 30 June to implement the rules. The threat of falling into DFG's disfavor has so far motivated 70% of Germany's research institutions to adopt

the guidelines. Most others expect to have them in place by the deadline.

It's unclear, however, whether the rules will apply uniformly to all scientists. For those holding permanent jobs as public servants, it is up to ministerial employers—rather than DFG—to punish misconduct, and proving deliberate or



**Laying down the law.** Stonewalling misconduct investigations is tantamount to guilt, says DFG president Ernst-Ludwig Winnacker.

gross negligence in data fabrication is notoriously difficult. However, talks are currently under way over possible changes to the employment law.

Under the new rules, institutions must appoint an independent ombudsperson who will initiate probes of misconduct allegations while protecting whistleblowers. In addition, to speed up future investigations, the new rules state that—wherever possible—primary research data must be stored for 10 years. This "is probably the one area in which researchers are most careless," says Johannes Dichgans, a neurologist and ombudsperson at the University of Tübingen. Failure to archive research records, or their deliberate destruction, could be judged as gross negligence and hence be punishable.

Some experts are less impressed with the new regulations. Hans-Jürg Kuhn, an anatomist at the University of Göttingen, says that the rules often "state the obvious" while being hard to follow in practice. He is

currently leading an investigation into alleged fraud in a cancer vaccine trial. The inquiry has been going for 16 months and is under mounting pressure from the media and from scientific leaders to deliver a verdict. Kuhn says he is not convinced that the rules, if they had been in place earlier, would have speeded up his investigation, which he says has been thwarted by slow access to patient information. "Privacy protection laws make it virtually impossible to store patient information in a manner that is easily accessible to later investigations," he

## GERMANY'S MISCONDUCT DEFINITION

- Falsification and fabrication of data
- Selective use of data without making it explicit
- Manipulation of graphs and figures
- Use of false information in grant and job applications
- Destruction of primary data
- Sabotage of others' work
- Plagiarism

says—and the new rules don't change that.

After 30 June, DFG will assess how institutions have implemented the rules. Peter Hans Hofschneider, a professor emeritus at the Max Planck Institute for Biochemistry in Martinsried who raised the alarm in the Herrmann-Brach case, says that DFG should come down hard on any institution that fails to adopt the rules. "If our efforts to put the guidelines into place are to be taken seriously, the DFG should act decisively," he says.

—ADAM BOSTANCI

## INTELLECTUAL PROPERTY

# High Court Reins In Patent Pirates

The U.S. Supreme Court has scaled back a controversial lower court ruling that some feared would open the door to wholesale copying of patented inventions. Research universities and some technology firms are applauding last week's unanimous decision, saying it will help protect valuable discoveries. But others say it will do little to reduce the growing number of costly patent fights.

\* *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.* ([www.supremecourtus.gov/opinions/01slipopinion.html](http://www.supremecourtus.gov/opinions/01slipopinion.html)).

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