

All collaborators held to be responsible for errors

- Inadequate controls led to false conclusions
- Call for guidelines on joint research

Berkeley

WHAT is the responsibility of scientists for factual errors made by their co-authors? That question was addressed by a Stanford University investigation that revealed the improper use of senile patients as 'normal' controls in several psychiatric studies conducted at Stanford's Mental Health Clinical Research Center (MHCRC). A report issued last week by Stanford provost James Rosse blames not only the clinical investigators who chose patients for the study, but also their co-authors in Stanford's department of psychiatry, who performed biochemical analysis on fluid samples taken from the patients.

The report was the culmination of a lengthy university review of the research of Philip Berger, who resigned as director of the MHCRC in 1987 after a university audit found that he had inappropriately spent \$128,000 of research funds from the National Institute of Mental Health (NIMH). At the request of the NIMH, Stanford initiated a review of Berger's research. The reviewers found that three studies of neurotransmitter metabolites in the cerebrospinal fluid of mentally ill patients had included senile patients among their 'normal' controls. Stanford's Ethical Scientific Performance committee judged the use of such controls "inappropriate and possibly confounding". It found that 10 research articles published over the past nine years contained analyses based on the controls, and that in three cases exclusion of the questionable control values changed or invalidated the conclusions of the article. At the

provost's request, the authors of all 10 articles wrote letters of correction or retraction to the journals in which the articles appeared.

The report concluded that the choice of inappropriate controls did not result from a "knowing, purposeful plan to mischaracterize the data", and therefore did not constitute scientific fraud. Because the data were collected 10 years ago, the committee said it was unable to determine whether the choice of the controls resulted from a clerical error that went undetected because of inadequate supervision by senior members of the research groups, or from a conscious decision. The latter, according to the committee, would have constituted a "significant error of judgement". Whatever the specific circumstances, the report suggests that closer supervision of laboratory groups and review of data by senior investigators are necessary to guard against such errors.

Jack Barchas, a professor of psychiatry at Stanford who is a co-author of many of the articles, criticized the committee for releasing its results before those of a current NIMH investigation, and for making "sweeping conclusions" that hold each participant in a collaborative research project "strictly liable" for errors made by other participants. In a statement released with the report, Barchas declines to accept the choice of controls as erroneous, but he points out that the analysis of samples carried out by members of his research group was beyond reproach.

"In an ideal world it is desirable that all collaborators on a given project should have equivalent knowledge concerning each other's databases", says Barchas, "but that view does not reflect the reality of the research process when two or more independent units interact in the service of dealing scientifically with a problem that neither group can approach alone." Barchas warns that a policy of holding every author responsible for the errors of a colleague will make interdisciplinary collaborations impossible.

In his report, Rosse notes that there are no generally accepted standards for the degree of responsibility borne by each participant in a collaborative project. He has asked Stanford's faculty senate to formulate guidelines for interdisciplinary collaboration that would outline the responsibility of co-authors and include procedures for data review and training of research teams.

Marcia Barinaga

Fusion research ends

London

THE reluctance of the British government to fund research with long-term applications led to the announcement last week of the winding down of fusion research. After the cuts made in fast reactor research in July (see *Nature* 334, 278; 1988), these latest cuts do not come as a surprise.

Britain's fusion research is based at the United Kingdom Atomic Energy Authority's Culham Laboratory where the Joint European Torus (JET) is sited. The government has agreed to fund JET until the scientific programme is completed in 1992, and will continue to fund research on the tokamak, a toroidal magnet for containing plasma. But it is winding down funds for other fusion research. £5 million will be cut from the annual budget of £21 million over the next three years. The first to go may be research on a reverse field pinch, a smaller version of the tokamak, and a range of studies, for example on environmental safety, materials and work for the Next European Torus (NET).

The future of 150 staff is now under threat, although the AEA will try to transfer the staff to commercial work. The Culham laboratory has doubled its income from outside contracts to about £8 million. A spokesman for the laboratory said work there would continue as long as there is a programme of fusion research in Europe.

Christine McGourty

Early launch for Hubble telescope

Washington

A CHANGE of plan by the Pentagon will allow a long-awaited scientific mission to get into orbit nearly two months ahead of schedule. The Hubble Space Telescope is now set for a December 1989 launch aboard the US space shuttle, a time slot originally reserved for the Department of Defense. But Defense officials have asked the National Aeronautics and Space Administration (NASA) for a delay. Worried that a one-month delay would move the two missions too close together, NASA proposed that the classified military mission swap launch dates with the space telescope, and the Pentagon agreed.

NASA officials do not expect any problems in getting the space telescope ready for the earlier launch date. The spacecraft is being stored in northern California, where it will undergo comprehensive ground tests later this month.

The only aircraft capable of transporting the 24,000 pound spacecraft is the Air Force C-5A transport, and NASA is building a special carrying case to allow air transport. If a C-5A is not available, the telescope will be transported by sea.

Joseph Palca

Moscow News

NATURE has made an arrangement with the *Novosti* Press Agency for gathering regular news from the Soviet Union. First, *Nature* has established a Moscow Advisory Group consisting of Academician Roald Sagdeev (chairman), Academician Vitaly Ginsburg (Lebedev Institute) and Professor Maxim Frank-Kamenetskii (Institute of Molecular Genetics) which will, among other things, identify to the editor of *Nature* and to *Novosti* topics to be covered. The group will also provide help and guidance to the reporters assigned to these tasks as required. The first contribution appears on page 8 of this issue. □