while fetuses with two normal genes are least affected.

"In spite of the considerable reservations which one must have in associating the behavioral aspects in the two species, the further elucidation of biochemical, physiological and nutritional aspects in the mouse may throw light on the etiology of the human disorder," Kacser and colleagues say. □

Conflict of interest at NSF

Sen. Edward M. Kennedy brought the National Science Foundation under some intense criticism last week when he released a report on a conflict-of-interest case that began three years ago. As chairman of the special subcommittee on the NSF, Kennedy called for changes in the Foundation's review policy.

The report, conducted by the General Accounting Office, analyzed NSF's funding of a proposal in 1974 and 1975 by William A. Johnson, a former Treasury Department adviser, now director of the George Washington University Energy Policy Research Project. Essentially, the report found that NSF failed to search out Johnson's source of outside funding, which turned out to be two oil lobbies. With grants totaling $130,000 from NSF, and $125,000 from the oil interests, Johnson wrote a series of discussion papers intended for White House use, which, in fact, argued the case of the oil companies against regulation.

Despite the apparent conflict-of-interest and disregard for normal procedures of review, NSF officials were not alarmed. The funding had been granted under the old Office of R&D Energy Research, an office hastily set up in 1974 to take over the functions of the abolished Office of Science and Technology. When President Ford restored the science adviser, the R&D energy research office was terminated, and NSF went back to its former methods of review. Consequently, NSF said that most of the recommendations of the report had already been implemented and others were under review.

Specifically, the report took umbrage with the following findings:

- Johnson had not asked NSF for permission to print the reports, some of which made about $3,800 in profits for the two oil lobbies;
- NSF had not asked Johnson to name his source of outside funding and was indifferent to the source's interest in the project;
- NSF bypassed its normal mail peer review of the proposal. Instead, it sent the proposal to Johnson's former superior and two of his subordinates at the Treasury Department;
- The oil lobbies used Johnson's papers in their advertisements opposing divestiture without disclosing all sources of funding for the projects.

Officials at the NSF pointed out that regulations now stipulate that grantees disclose all outside funding sources and that NSF approve any commercial publication of reports funded by the Foundation. "The whole area of policy research is under consideration at the NSF and will continue for some time," officials said. "The report has been very helpful." □

Science Talent Search: Top 40 winners

Science Service this week announced winners of the 36th annual Science Talent Search, in which high school students conduct independent research to compete for college scholarships. The winners—7 girls and 33 boys—will take displays of their projects to Washington March 4-8 for final judging for $67,500 in scholarships and awards, provided by the Westinghouse Education Foundation.

The 40 winners, selected from 1,009 qualified entrants, come from 31 schools in 19 states. About half the students come from schools that have never placed winners before. The school with the largest number of winners this year—seven—is Bronx High School of Science in New York City, which has averaged nearly two winners a year since the contest began.

The field of biology attracted the largest number of winners, with 12 students performing experiments in this discipline. Biochemistry is represented by eight projects, math by ten, physics by six and chemistry by four.

Several students used the facilities of nearby universities to perform their experiments. A Florida girl, for example, participated in the summer research program at the University of Florida's Florida Foundation for Future Scientists to study microorganisms that attack tissue surrounding teeth. Some of the mathematics and physics students used computers in their projects. One boy produced a computer simulation of a rapid-transit system to help make scheduling decisions; another developed a computer program on the motion of electrons in crystals.

Not all the experiments, of course, were so elaborate. An Indiana boy played recorded frog sounds through a ceramic model frog, which was immediately attacked when placed near real frogs. The student, a varsity athlete in track and swimming, was thus able to establish how frogs use sound patterns to establish territorial rights and warn of conflicts. A winner from rural Wisconsin studied pollution in a nearby creek. And one adventuresome student, who recently went on a wildlife observation safari in Kenya, studied the relationship between certain birds and plants in his native Pennsylvania.

As in previous years, some of the projects may represent new scientific discoveries. A student from Pennsylvania reports on what he believes to be a previously unknown insect growth hormone. A Bronx High School of Science student, working at Long Island Jewish-Hillside Medical Center, conducted studies of enzyme repression that he hopes will increase understanding of glucose metabolism in the body.

Other projects may someday lead to useful commercial products. A South Carolina student built a laser teletype printer to replace the conventional carbon head printer. To do so, he first had to design and build his own microcomputer. An Oklahoma girl, who wants a career as an industrial or research chemist, studied a rare form of steel corrosion.

This year's 40 winners are:

CALIFORNIA: *John W. Belliveau*, Woodside Priory School, Portola Valley.

FLORIDA: *Christopher M. Lohse*, Cocoa H.S., Cocoa; *William M. Rojas*, Mainland Sr. H.S., Daytona Beach; *Annie L. Murray*, Melbourne H.S., Melbourne; *James R. Driscoll*, Winter Park Sr. H.S., Winter Park.

GEORGIA: *Virginia J. Wight*, Warner Robins H.S., Warner Robins.

HAWAII: *Katherine S. Takaki*, Henry J. Kaiser H.S., Honolulu.

INDIANA: *Lori E. Rhodes*, East Noble H.S., Kendallville; *Kenneth J. Lohmann*, West Lafayette H.S., West Lafayette.

MAINE: *Louis J. Gotlib*, Bangor H.S., Bangor.

MARYLAND: *Arjun G. Yodh*, Springbrook H.S., Silver Spring.

MASSACHUSETTS: *Andrew D. Keller*, Lexington H.S., Lexington.

MINNESOTA: *James U. Bowie*, Mayo Sr. H.S., Rochester.

NEW MEXICO: *Grant H. Stokes*, Los Alamos H.S., Los Alamos.

NEW YORK: *Robert J. Milrod*, Baldwin Sr. H.S., Baldwin; *James G. Propp*, Great Neck North Sr. H.S., Great Neck; *Evan M. Tick*, Jamaica H.S., Jamaica; *Douglas W. Laske*, *David S. Laster*, *Andrew Wen-Chuan Lo*, *Kinkuen Lui*, *Victor P. Menon*, *Jonathan S. Roberts*, *Dorothy Tsang*, Bronx H.S. of Science, New York; *Jeremy M. Frend*, Ramaz School, New York; *Daniel D. Blau* and *David R. Grant*, Stuyvesant H.S., New York; *Paul J. Maddon*, Martin Van Buren H.S., Queens Village.

OHIO: *Paul A. Cahill*, East H.S., Akron.

OKLAHOMA: *Anita B. Carlberg*, Ponca City Sr. H.S., Ponca City.

PENNSYLVANIA: *Richard H. Ebright* and *Paul M. Embree*, Muhlenberg Twp. H.S., Laureldale; *Charles C. Mechem*, Episcopal Academy, Merion.

SOUTH CAROLINA: *Kenneth W. Egan*, Eastside H.S., Taylors.

TEXAS: *Richard C. Schirato*, Skyline H.S., Dallas.

VIRGINIA: *Glenn C. Poole*, Annandale H.S., Annandale; *Lawrence R. Weatherford* and *Nancy E. Zeleniak*, West Springfield H.S., Springfield.

WASHINGTON: *Stephen A. McFadden*, Kennewick H.S., Kennewick.

WISCONSIN: *David G. Kieper*, Antigo H.S., Antigo. □