Results of Research Funding Questionnaire

An amazing 35% of ARVO members responded to this winter’s brief questionnaire dealing with research funding. Almost 2,100 returned forms have been tabulated, and I will present the findings briefly in this report.

The respondents represented not only a typical cross section of the ARVO membership but included 804 principal investigators (PIs) of National Eye Institute (NEI) research project grants. This represents at least three-fourths of all PIs. Five hundred additional responders are supported as co-investigators or other staff on NEI-sponsored research grants. Those who answered the questionnaire, like the ARVO membership, were equally divided between MD and PhD scientists. The 13 ARVO sections were represented in almost exact proportion to their membership percentages.

In all of the cross-tabulations, it was striking that the answers of MD and PhD researchers were not significantly different. Furthermore, while there were slight differences in the responses of clinically oriented researchers compared to laboratory investigators, their answers showed almost no statistically significant variations. It is gratifying that this cohesion exists at a time of stress in our community.

The information included the first-ever compilation of the funding sources other than the National Institutes of Health (NIH) that are being used by our members. Almost one-fifth of the respondents receive funds from private foundations, more than 18% indicated support from private industry, and 10% receive active funding from Research to Prevent Blindness, Inc., of New York. This year, for the first time, ARVO sent to its members the Guidebook of Eye and Vision Research Funding Sources. The information from the questionnaire will be followed up to expand and to quantify the monies available for investigation. Nearly 40% of our respondents have applied for support from other government or private sources in response to decreases in NEI support.

Forty percent of those who answered described their activities as basic laboratory research, 25% categorized their work as clinically oriented laboratory work, 14% carry out a mixture of research activities, and about 9% work in clinical trials or epidemiology.

Most indicated that they had needed to adjust research expenditures because of decreases in NIH levels of funding. This was most often accomplished by reducing expenditures for supplies, equipment, and travel, and by reducing the number of experiments performed. The second most frequent response to the recent cuts was a decrease in percent effort or salary of the principal investigator and of technical staff. The monies for salaries of co-investigators and fellows, as well as animal costs, were the least likely to be reduced.

Our investigators indicated that decreases in funding had hurt the quantity of their research much more than its quality. On scales of 1 (not at all) to 5 (a lot), the median answer for the effect on quality was 2, while the quantitative effect was a median of 4. There was a broad range of opinion as to whether decreases in funding lead to less innovative research. On the same scale, the median score was 3, with nearly equal numbers of answers in the categories of no effect on innovation and major effect.

There is little question that the repeated decreases in funding are leading to an “inflation mentality” among investigators in their future requests for funds. More than one-half indicated that in their next proposal they would anticipate cuts by increasing their budgets either “moderately” or “a lot.” Only 16% said that the continued likelihood of reductions would not cause them to inflate their next budget (Table 1).

Two sets of questions sought to determine the approach that investigators would recommend to the NEI Director and the National Advisory Eye Council in adjusting to the present failure of Congressional appropriations to keep pace with research needs. In each case, the dichotomy was between some cuts in existing grants and decreases in the number of new grants. By a margin of almost 2 to 1, investigators chose cutting existing budgets over decreases in the proportion of approved and funded new research projects. Their choices of the best mix of across-the-board cuts and funding rates appears to be in line with recent Council decisions (Tables 2 and 3).

The choice of the investigators for the best categories of the budget to be decreased or increased was also assessed on a scale of 1 (decrease a lot) to 5 (increase a lot). Laboratory research projects are the clear choice to be increased (median score = 4). Pilot grants, clinical research grants, and fellowship training also had median and mean scores at or above 3 on this scale. Multicenter clinical trials and core grants had a mean score of 2.5, whereas construction grants were rated under 2 (Table 4).

The recent Congressionally mandated ceiling on salary level was mildly or strongly favored by more than two-thirds of the sample. This ruling will allow a maximum of $120,000 as the salary multiplied by percent effort in personnel budgets. It is unclear how many respondents knew that this already had been implemented. The reaction was more mixed to the hypothetical possibility that a limit be imposed on
total allowed percent effort at less than 100%. The median score was 3 on a scale of 1 (strongly favor) to 5 (strongly against).

The NEI staff appears to have the confidence and support of those who answered. Of those who had an opinion, nearly one-half rated the staff as “very helpful,” and only 6% indicated the category “rarely helpful” (Table 5). It was of great interest to read the nearly 500 hand-written comments in an open-ended question about how we might improve the relationship between NEI and vision researchers. Many investigators want more contact with NEI staff. Specific suggestions included: regional meetings, personal visits of staff to laboratories, an NEI newsletter or written communication through ARVO, and use of electronic mail/computer interchange. The type of information thought to be especially helpful was advice to young investigators and a guide to whom best to call for various types of information at NEI.

In contrast to the stated intention of many researchers to increase their proposed budgets in anticipation of later downward negotiation, many suggested funding more grants of lower cost. There appears to be substantial sentiment for developing mechanisms to fund even more small projects in favor of large grants. The suggestion was made repeatedly that symposia for interested investigators might productively find means to carry out research or training more cost-effectively (eg, fellowship advisors, core grant directors, clinical trials principal investigators).

Finally, it is clear that a substantial number of respondents would benefit from a better understanding of the grant review process. The written answers of some indicated an incorrect grasp of the relative roles of the Division of Research Grants (DRG) and its study sections and executive secretaries, NEI and its staff, and the National Advisory Eye Council.

For ARVO, this information points to several important action items, some of which already have been discussed with the National Advisory Eye Council (April 18 and 19, 1990) and with the NEI director (April 30, 1990), as part of our society’s role in fostering vision research.

The most important priority is for ARVO’s members to participate more actively in efforts to increase the amount of government research funding. You recently have received the testimony of Drs. Morton Goldberg and Stephen Ryan representing the Citizen’s Budget for vision research before Congress. This mailing showed how to write to representatives to voice your opinions. Do so now. I, as Secretary-Treasurer, and the Central Office will keep ARVO actively positioned to help in the coordinated efforts of other eye and vision research organizations to maximize funding.

In this report and in others to appear in Investigative Ophthalmology and Visual Science, I will provide information on the progress of funding and how the research grant process functions to improve the knowledge of our members. We hope to include information from the Eye Institute that will be of assistance to the membership. Finally, we will be discussing the possibility of holding symposia to discuss the funding challenges of the next decade to solicit a broader range of opinion than can be obtained in questionnaires.

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Secretary-Treasurer
ARVO