

THE PHYSIOLOGIST



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EDITORIAL

Repeat Performance

"It's déjà vu all over again" is a quotation credited by some to Yogi Berra. However, it could just as easily be the cry emanating from every biomedical research laboratory in the country. For the third time in as many years, the Reagan Administration has advanced a proposal to reduce funding for NIH research grants, causing potential disruption of the research effort.

Last year NIH faced the threat of Gramm-Rudman-Hollings (G-R-H) and an anticipated steep reduction in biomedical support. Rumors abounded of a potential for a \$300-million reduction in NIH's budget. Individual grants were to be reduced by as much as 16% because of the Congressional mandate for 6,100 new grants in FY 1986.

As in the past, NIH's white knight, the Congress, came to its rescue, turning a potential tragedy into a happy ending. In fact, in 1986 the 99th Congress passed and the President signed legislation providing substantial and necessary appropriation increases in the NIH budget. The appropriation called for \$6.2 billion, a generous 17% increase over the NIH's FY 1986 G-R-H level of spending. The Congressional mandate was for approximately 6,200 new and competing renewal research project grants in FY 1987.

What one hand giveth the other taketh away, and in this case with a vengeance. The Administration proposed to "extend [to FY 1988] the availability" of \$334 million from the current FY 1987 appropriation expending these funds only in FY 1988. The Administration claims the proposal would help reduce the deficit to the \$108 billion mark mandated by G-R-H.

(Continued on p. 18)

Association of Chairmen of Departments of Physiology Annual Questionnaire Results

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Lexington, KY*

Each year department chairpersons are asked to fill out a questionnaire concerning various aspects of departmental activities. This past year 150 departments received surveys, with 89 responding. Most of the respondents were from the United States, with a few from Canada.

All averages relating to salaries, stipends, and budgets are in whole American dollars. Those dollar values that were reported as Canadian dollars were converted to American dollars with the formula $\$1.00 \text{ Canadian} = \0.71 American . As usual, average salaries have been determined for chairmen, professors, associate professors, assistant professors, and instructors, along with the percent change from last year's average. In addition, average salaries have been determined with respect to the number of years a faculty member has been at his/her current position. Average starting salaries have also been determined for each position.

Again this year, the amount of extramural research funds has been compared to research space and number of faculty. Departments were ordered according to amount of research space and assigned a "space rank," with 1 being the department with the greatest amount of space. The top, middle, and bottom 10 departments according to funded outside research grants are listed along with grant income and

space per faculty. These results suggest that there is some correlation between grant income and research space.

Results of questionnaires collected over the last eight years concerning graduate programs have also been included. If one assumes that the number of departments responding has remained fairly constant, it would appear that the number of Ph.D.s granted per enrollment has gradually decreased. As expected, stipends have increased annually with the institutions sharing more and more in the funding of students.

One hundred fifty surveys were sent out to Chairmen of Departments of Physiology. These results are from 89 completed surveys received by December 5, 1986. Surveys were received from universities in the United States and Canada. For some of the analysis, surveys were divided into three categories: 1) those from public medical schools (those with M.D. programs), 2) those from private medical schools (also with M.D. programs), and 3) those from nonmedical schools (including dental, osteopathic, podiatric, and veterinary schools). Unless otherwise stated, all numbers represent totals from all surveys and numbers in parentheses represent the average number per department.

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EDITORIAL

(Continued from p. 17)

Once again it was time to call in the cavalry. Unless the Congress rejected the proposed revision of the FY 1987 NIH budget plan, only 5,700 competing project grants would be funded instead of "no fewer than 6,200" as originally mandated. Furthermore, only an estimated 5,700 competing project grants would be awarded in FY 1988 under the "extended availability" plan.

The plan proposed by Reagan would translate into average downward negotiations for competing and noncompeting grants of as much as 20% from levels recommended by scientific peer review groups. Without implementation of the plan and no additional appropriation, NIH estimates it would be able to award only 2,000 grants in FY 1988.

If you had the opportunity to read the President's FY 1987 Supplemental Budget request, you might have been lulled into a false sense of security, for its states "there will be no Executive Branch action to defer or otherwise restrict funds currently available until after Congressional enactment of this proposal. If and when Congress enacts this proposal, appropriate actions will be taken to implement the law."

As an investigator who has recently received a notice of award reflecting an 18% reduction, you might be surprised by the above language. The NIH and the Department of Health and Human Services were moving to implement these cuts immediately, the pledge notwithstanding. Whether the actions stem from covert instructions or are a means to maintain smooth operations, the actions are illegal inasmuch as they represent an impoundment or deferral under the Impoundment Act of 1974.

The cuts are enormously disruptive to research activity. Once a research project is cut back in scope, even a restoration of funds cannot return the research to its originally anticipated scale.

In consort with nearly 100 organizations representing the nation's biomedical and behavioral research scientists, research institutions and providers and consumers of health care, the APS has urged members of Congress "to speedily reject the Administration's budget request." This was only one of the several courses of action considered to convince the Administration to comply with the law.

Whatever the reason, the Administration rescinded its January directive in March. It remains likely that the months-long process of Congressional deliberations for FY 1988 budget will address the issue. Therefore, APS urges you to join with members of other organizations to ask the Congress to act quickly to reject the Administration's proposal to reduce funding for research project grants at NIH. The lesson learned by APS President Franklyn Knox during his recent Congressional visit (see Editorial, *The Physiologist*, February 1987) is that a constituent's voice is the most meaningful voice heard by an elected official.

Martin Frank

Eugene M. Landis (1901-1987)

Eugene Markley Landis, president of APS in 1952-1953 and a member since 1928, died on February 14, 1987. Landis received his A.B., M.D., and Ph.D. from the University of Pennsylvania. He taught physiology at Pennsylvania and the University of Virginia before joining the faculty of Harvard Medical School in 1943, where he succeeded Walter B. Cannon and Henry P. Bowditch as the third George Higginson Professor of Physiology. Having achieved an early reknown as the first person to measure directly capillary pressure and observe the flow of water through capillary walls, Landis went on to a distinguished research career in cardiovascular physiology.



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Deadline for submission of material for publication: Dec. 5, February issue; Feb. 5, April issue; April 5, June issue; June 5, August issue, Aug. 5, October issue; Oct. 5, December issue. If you change your address or telephone number, please notify the central office as soon as possible.

Type of Institution

Physiology department primarily in a medical (M.D.) (81) or nonmedical (8) school. If nonmedical, specify type of school: dental (2), podiatry (1), other (1), osteopathic (2), veterinary (2).
Primary affiliation: public (61) or private (28).

Numbers of Faculty With Academic Appointments (Regular or Joint) in Your Department

Figures shown are for the total number of faculty. Numbers in parentheses are average number of faculty per department. Although the sum of each side of each row should add up to the number in column 5 (total), this is not always the case because some surveys were not filled out completely.

| SUM = TOTAL = SUM | | | | | | | |
|--|----------------|------|-------|-------------------|-----------------|----------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Degree(s) Held | | | | No. of faculty | Tenured | Not tenured | |
| Ph.D. only | M.D. only | Both | Other | | | | |
| Entire salary paid through your department: | | | | | | | |
| Full time | 998 (11.21) | 71 | 48 | 29 | 1146 (12.88) | 798 (8.97) | 348 (3.91) |
| Part time | 42 | 16 | 6 | 6 | 70 | 25 | 42 |
| Part of salary paid through your department associated with: | | | | | | | |
| Another basic sci. dept. | 31 | 3 | 2 | 3 | 39 | 24 | 15 |
| A clinical dept. | 60 | 31 | 13 | 3 | 107 | 58 | 35 |
| Other (emeritus, etc.) | 186 | 68 | 22 | 9 | 285 | 113 | 90 |

Unfilled Positions

Number of unfilled positions in each rank in all departments:

| | | | |
|---------------------|----|---------------------|----|
| Professor | 17 | Associate Professor | 20 |
| Assistant Professor | 60 | Instructor | 0 |

Number of unfilled positions due to:

| | | | | | | | |
|----------------------|----|---------------------------|----|-------------|----|-------|----|
| Creation of new FTEs | 25 | Failure to promote/tenure | 3 | | | | |
| Death | 4 | Retirement | 16 | Resignation | 26 | Other | 18 |

Estimated number of junior positions expected to become vacant in the next 5 years due to retirement, new FTEs, etc.:

| | | | | | | | | | |
|------|----|------|----|------|----|------|----|------|----|
| yr 1 | 31 | yr 2 | 40 | yr 3 | 29 | yr 4 | 21 | yr 5 | 23 |
|------|----|------|----|------|----|------|----|------|----|

Current Graduate Students and Postdoctoral Fellows

| | |
|---|-------|
| Number of graduate students enrolled in all departments' Ph.D. programs | 1,002 |
| Number of postdoctoral fellows currently in all departments | 497 |
| Number of vacant postdoctoral positions | 59 |

Training Support

| | | |
|---|----------|---------|
| Number of departments with/without training grants that support predoctoral trainees | Yes (28) | No (50) |
| Number of departments with/without training grants that support postdoctoral trainees | Yes (27) | No (51) |

| | Predoctoral (79 departments) | | Postdoctoral (69 departments) | |
|--|---------------------------------|----------|----------------------------------|--|
| | min. | \$4,000 | \$13,490 | |
| Average starting stipend per year for trainees | max. | \$20,904 | \$24,888 | |
| | mean | \$7,530 | \$17,120 | |
| | NIH level | \$6,552 | \$15,996 | |

| | |
|---|-------------------------------|
| Amount of tuition paid by predoctoral trainee (% of departments responding) | 58%—student pays no tuition |
| | 25%—student pays all tuition |
| | 17%—student pays some tuition |

Number of pre- and postdoctoral trainees supported by:

| | Doctoral | Postdoctoral |
|--------------------------------------|----------|--------------|
| Training grants | 108 | 88 |
| Individually federally funded awards | 36 | 94 |
| Research grants | 239 | 206 |
| State funds | 283 | 21 |
| Private foundations | 34 | 51 |
| Institutional awards | 134 | 21 |
| Medical Scientist Training Program | 19 | 1 |
| Other | 67 | 15 |

Other sources of support for trainees: U.S. Army, teaching assistant funding, endowments, industry, NMFS (NOAA), NORAD, MRC fellowships, tuition waivers, departmental support, NIH postdoctoral fellowship, World Health Organization, pharmaceutical company, clinical departments, BRSGs, the Egyptian Cultural and Education Bureau, and several foreign governments including Iraq, Switzerland, Canada, and Indonesia.

Number of Trainees Who Have Finished Doctoral or Postdoctoral Work During the Year Ending June 30, 1986

| | Doctoral | Postdoctoral |
|-------------------------------------|----------|--------------|
| Total number finishing: | 98 | 118 |
| Females | 32 | 25 |
| Blacks | 2 | 0 |
| Other minorities | 6 | 13 |
| Positions needed | 1 | 3 |
| Research area (of those finishing): | | |
| Cardiovascular | 29 | 37 |
| Cell/Tissue | 15 | 21 |
| Comparative | 3 | 1 |
| Endocrine | 11 | 6 |
| Environmental | 1 | 0 |
| Gastrointestinal | 6 | 6 |
| General | 0 | 4 |
| Muscle/Exercise | 5 | 4 |
| Neural | 19 | 19 |
| Renal | 3 | 2 |
| Reproduction | 2 | 11 |
| Respiration | 6 | 8 |

Number of postdoctoral students presently taking additional training because they were unable to find a satisfactory position 12

Applicants to Graduate Program

| | |
|--|--------------|
| Number of applicants to 74 departments' Ph.D. programs this year | 1,575 (21.3) |
| Number of these applicants accepted | 261 (3.5) |

Approximate Average GRE Score of Those Accepted

Because of the ambiguity of this question, averages are given for each method of reporting GRE scores.

| |
|--|
| 14 surveys gave one score—ave. = 615 |
| 7 surveys gave scores for all three GRE scores—avg. = V, 571; Q, 623; A, 631 |
| 17 surveys gave a total score for V + Q—avg. = 1,208 |
| 4 surveys gave a total score for V + Q + A—avg. = 1,813 |
| 7 surveys gave a percentage—avg. = 62% |
| 2 surveys gave scores for Advanced Tests—avg. = 675 |

Departmental Faculty—1,152 total faculty (% of total)

| | |
|---------------------------|--------------|
| Number of faculty who are | |
| Black | 14 (1.22%) |
| Other minority | 76 (6.60%) |
| Female | 155 (13.45%) |

Departmental Budget for Fiscal Year 1985-1986 (Salaries and Operation)

| | Mean | Minimum | Maximum |
|-------------------------|-----------|-----------|-------------|
| Institutional sources | \$822,371 | \$150,000 | \$2,004,220 |
| Outside research grants | 1,069,420 | 0 | 5,246,400 |
| Training grants | 67,359 | 0 | 1,209,790 |
| Other budget support | 102,851 | 0 | 2,744,810 |
| Total | 2,073,900 | 150,000 | 7,807,080 |

Other sources of support: dental school, general research support allocation, foundation awards, equipment grants, internal research funding, endowments, gifts, industrial contracts, biomedical research support grants (BRSGs), state funding, computer fund, royalties, income fund reimbursement, research incentive funds, indirect costs recovered, research career development awards (RCDAs), research fellowships, library/instrument shop, chairman discretionary, faculty cost component, alumni gifts and donations, affiliated institutions, salary support, revenue from clinics, pharmaceutical grants, earned income for services, institutional start-up funds, graduate school research grants, special physiology research fund, clinical funds.

Space Assigned to Your Department (Excluding Lecture Rooms) in Square Feet

| | Mean | Minimum | Maximum |
|---------------|--------|---------|---------|
| Research | 11,846 | 0 | 36,000 |
| Teaching labs | 2,094 | 0 | 11,450 |
| Office space | 2,840 | 0 | 10,899 |
| Storage | 389 | 0 | 2,420 |
| Other | 1,583 | 0 | 12,405 |
| Total | 18,741 | 2,340 | 53,000 |

Of 82 surveys listing space, 48 had departmental teaching labs, 23 had no teaching labs, and 11 shared multidisciplinary teaching labs.

TABLE 1. Faculty Salaries for Fiscal Year 1986-1987

| | Mean | % Change from 1985-1986 Survey | Minimum | Maximum | No. of Faculty |
|-----------------------------|----------------|-----------------------------------|---------|---------|----------------|
| Chairmen | | | | | |
| All schools | \$79,669 | ↑1.5 | 39,788 | 124,100 | 85 |
| Medical public | 80,231 | ↑1.6 | 48,000 | 124,100 | 57 |
| Medical private | 85,058 | ↑5.2 | 58,092 | 119,978 | 20 |
| Nonmedical | 62,188 | ↓7.5 | 39,788 | 77,250 | 8 |
| Professors | | | | | |
| All schools | 59,924 | ↑1.2 | 30,689 | 129,800 | 428 |
| Medical public | 59,182 | ↑2.0 | 30,689 | 129,800 | 334 |
| Medical private | 64,884 | ↑6.3 | 43,000 | 100,000 | 79 |
| Nonmedical | 50,337 | ↓5.4 | 36,000 | 65,000 | 15 |
| Associate Professors | | | | | |
| All schools | 44,015 | ↑1.6 | 25,871 | 70,718 | 326 |
| Medical public | 43,524 | ↑1.1 | 25,871 | 70,718 | 235 |
| Medical private | 46,163 | ↑2.3 | 29,952 | 65,000 | 79 |
| Nonmedical | 39,476 | ↓0.25 | 27,700 | 54,400 | 12 |
| Assistant Professors | | | | | |
| All schools | 34,339 | ↑1.5 | 19,366 | 71,900 | 283 |
| Medical public | 33,500 | ↓2.7 | 19,366 | 71,900 | 188 |
| Medical private | 36,060 | ↑9.5 | 22,520 | 49,500 | 79 |
| Nonmedical | 35,698 | ↑5.6 | 22,300 | 44,000 | 16 |
| Instructors | | | | | |
| All schools | 23,472 | ↓2.0 | 16,200 | 31,500 | 30 |
| Medical public | 22,561 | ↓9.6 | 16,200 | 28,000 | 20 |
| Medical private | 25,293 | ↑9.3 | 19,000 | 31,500 | 10 |
| Nonmedical | No instructors | | | | |

TABLE 2. Average Salary by Number of Years at Position

| Chairmen | | | Professors | | | Associate Professors | | | Assistant Professors | | |
|----------|----------|----------------|------------|----------|----------------|----------------------|----------|----------------|----------------------|----------|----------------|
| Years | Salary | No. of Faculty | Years | Salary | No. of Faculty | Years | Salary | No. of Faculty | Years | Salary | No. of Faculty |
| 0-5 | \$72,020 | 34 | 0-5 | \$54,559 | 153 | 0-5 | \$42,559 | 183 | 0-5 | \$34,020 | 251 |
| 6-10 | 81,566 | 20 | 6-10 | 60,660 | 108 | 6-10 | 46,321 | 83 | 6-10 | 37,227 | 24 |
| 11-15 | 82,974 | 12 | 11-15 | 62,510 | 84 | 11-15 | 45,100 | 41 | 11+ | 35,497 | 16 |
| 16-20 | 88,169 | 12 | 16-20 | 65,371 | 62 | 16+ | 45,114 | 19 | | | |
| 21+ | 91,072 | 7 | 21-25 | 64,456 | 18 | | | | | | |
| | | | 26+ | 58,528 | 3 | | | | | | |

TABLE 3. Starting Salaries

| | Professor | Associate Professor | Assistant Professor | Instructor |
|-----------------|-----------|---------------------|---------------------|------------|
| All schools | \$47,234 | \$38,218 | \$30,208 | \$21,992 |
| Medical public | 45,379 | 37,503 | 30,048 | 22,239 |
| Medical private | 54,603 | 41,959 | 31,935 | 24,071 |
| Nonmedical | 42,006 | 34,198 | 27,515 | 17,549 |

Moving?

If you change your address or telephone number, please notify the APS office (301-530-7171) as soon as possible.

TABLE 4. Departmental Ranking According to Outside Research Grants

| Rank | Grant Income | Grant Income/ Faculty | Research Space, sq ft | Research Space/ Faculty | Space Rank | No. of Faculty |
|-------------------|--------------------|--------------------------|--------------------------|----------------------------|------------|----------------|
| Top Ten | | | | | | |
| 1 | \$5,246,400 | \$238,473 | 19,198 | 873 | 14 | 22 |
| 2 | 4,061,678 | 119,461 | 26,263 | 772 | 6 | 34 |
| 3 | 3,786,038 | 172,093 | 21,211 | 964 | 10 | 22 |
| 4 | 3,201,046 | 133,377 | 35,104 | 1,463 | 2 | 24 |
| 5 | 2,740,600 | 105,408 | 9,640 | 371 | 48 | 26 |
| 6 | 2,631,720 | 239,247 | 17,650 | 1,605 | 16 | 11 |
| 7 | 2,600,000 | 100,000 | 36,000 | 1,385 | 1 | 26 |
| 8 | 2,548,205 | 141,567 | 21,604 | 1,200 | 9 | 18 |
| 9 | 2,509,237 | 193,018 | 18,417 | 1,417 | 15 | 13 |
| 10 | 2,494,392 | 207,866 | 7,265 | 605 | 59 | 12 |
| Avg | \$3,181,932 | \$165,051 | 21,235 | 1,066 | 18 | 21 |
| Middle Ten | | | | | | |
| 38 | \$1,007,528 | \$83,961 | 6,599 | 550 | 65 | 12 |
| 39 | 997,603 | 66,507 | 9,652 | 643 | 47 | 15 |
| 40 | 978,832 | 69,917 | 13,000 | 929 | 27 | 14 |
| 41 | 947,797 | 52,655 | 10,865 | 604 | 38 | 18 |
| 42 | 914,818 | 91,482 | 10,000 | 1,000 | 42 | 10 |
| 43 | 866,427 | 54,152 | 14,000 | 875 | 23 | 16 |
| 44 | 831,000 | 55,400 | 10,800 | 720 | 40 | 15 |
| 45 | 826,752 | 63,596 | 5,067 | 390 | 67 | 13 |
| 46 | 800,000 | 114,286 | 4,600 | 657 | 71 | 7 |
| 47 | 768,300 | 36,586 | 14,600 | 695 | 20 | 21 |
| Avg | \$893,906 | \$68,854 | 9,918 | 706 | 44 | 14 |
| Bottom Ten | | | | | | |
| 77 | \$77,000 | \$11,000 | 3,223 | 460 | 77 | 7 |
| 78 | 60,000 | 15,000 | 1,800 | 450 | 81 | 4 |
| 79 | 42,428 | 7,071 | 3,534 | 589 | 76 | 6 |
| 80 | 41,000 | 10,250 | 1,532 | 383 | 82 | 4 |
| 81 | 25,218 | 2,293 | 7,200 | 654 | 60 | 11 |
| 82 | 20,000 | 2,500 | 770 | 96 | 84 | 8 |
| 83 | 0 | 0 | 12,534 | 1,139 | 30 | 11 |
| 83 | 0 | 0 | 10,172 | 565 | 41 | 18 |
| 83 | 0 | 0 | 900 | 300 | 83 | 3 |
| 83 | 0 | 0 | 0 | 0 | | 3 |
| Avg | \$26,566 | \$4,811 | 4,167 | 464 | 68 | 7.5 |

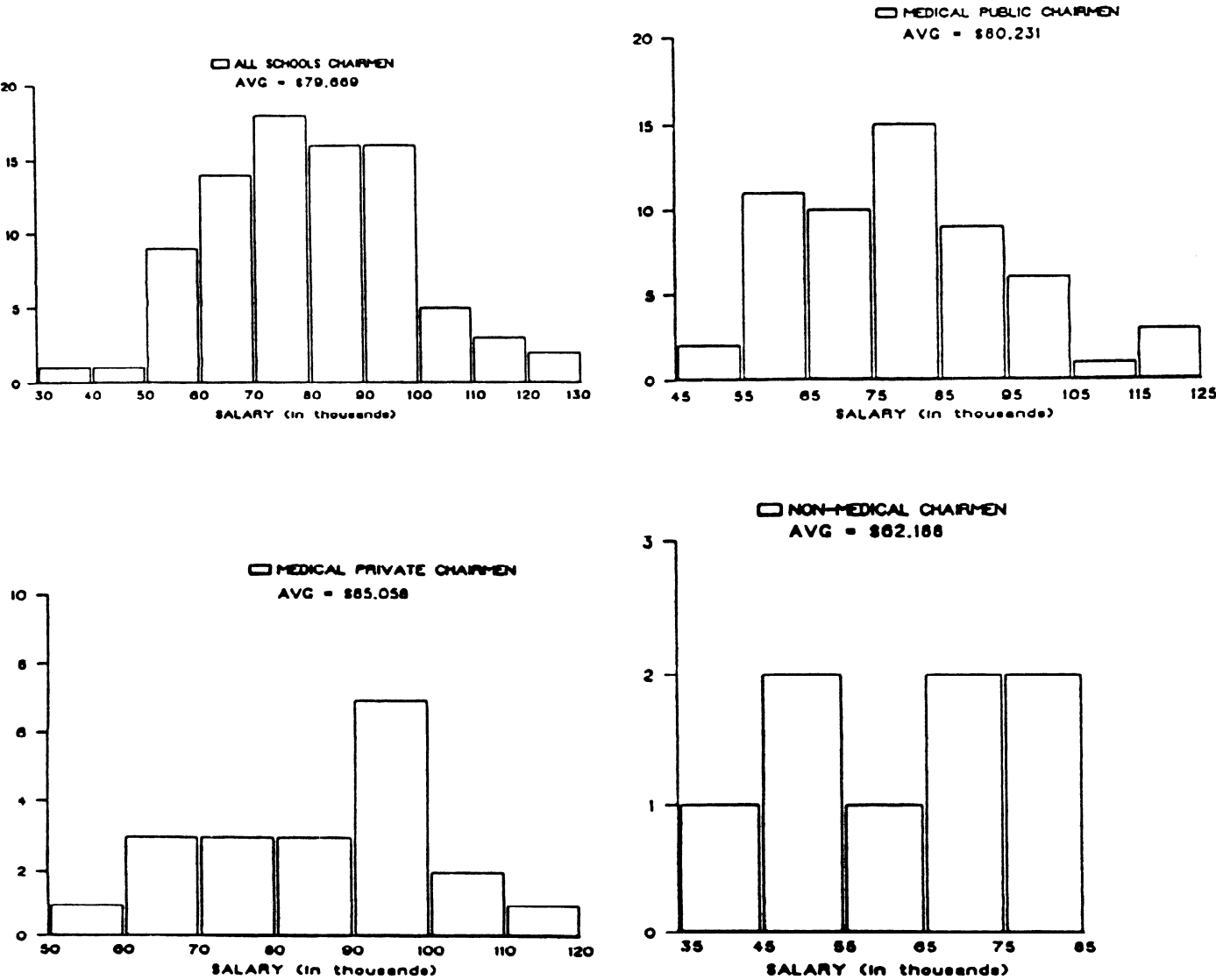
TABLE 5. Pre- and Postdoctoral Trainees

| | Year | | | | | | | |
|-----------------------------|----------|--------|--------|--------|--------|-------|-------|------|
| | 1986 | 1985 | 1984 | 1983 | 1982 | 1981 | 1980 | 1978 |
| Ph.D.s granted | 98 | 113 | 135 | 153 | 137 | 165 | 190 | 167 |
| Degrees to minorities | | | | | | | | |
| Female | 32 | 40 | 42 | 32 | 40 | 41 | 33 | 39 |
| Black | 2 | 1 | 3 | 2 | 4 | 3 | 7 | 3 |
| Others | 1 | 7 | 7 | 8 | 9 | 12 | 18 | 10 |
| Area of study | | | | | | | | |
| Cardiovascular | 29 | 19 | 47 | 52 | 25 | 33 | 37 | 31 |
| Cell/Tissue | 15 | 14 | 34 | 32 | 26 | 6 | 17 | 10 |
| Comparative | 3 | 1 | 2 | 5 | 2 | 1 | 18 | 1 |
| Endocrine | 11 | 8 | 50 | 49 | 41 | 38 | 33 | 28 |
| Environmental | 1 | 0 | 8 | 4 | 3 | 1 | 1 | 5 |
| Gastrointestinal | 6 | 0 | 6 | 5 | 6 | 7 | 3 | 4 |
| General | 0 | 2 | 3 | 29 | 4 | 17 | 11 | 36 |
| Muscle/Exercise | 5 | 9 | 6 | 9 | 6 | 7 | 4 | 6 |
| Neural | 19 | 22 | 32 | 31 | 30 | 28 | 45 | 34 |
| Renal | 3 | 6 | 9 | 8 | 12 | 11 | 8 | 12 |
| Respiratory | 6 | 9 | 12 | 8 | 7 | 10 | 7 | 5 |
| Ph.D. students in program | 1,002 | 1,040 | 1,329 | 991 | 1,043 | 1,036 | 1,060 | 907 |
| Postdocs in program | 497 | 524 | 534 | 534 | 475 | 493 | 472 | 476 |
| Vacant postdoc positions | 59 | 59 | 64 | 52 | 51 | 53 | 75 | 78 |
| Postdocs finishing work | 118 | 111 | 130 | 132 | 147 | 131 | 160 | 109 |
| Faculty positions available | 97 | 78 | 99 | 92 | 84 | 87 | 92 | 97 |
| Stipends | | | | | | | | |
| Ph.D. students | \$7,530 | 7,244 | 6,600 | 5,845 | 5,609 | | | |
| Postdocs (1st yr) | \$17,120 | 16,890 | 15,634 | 14,689 | 14,097 | | | |

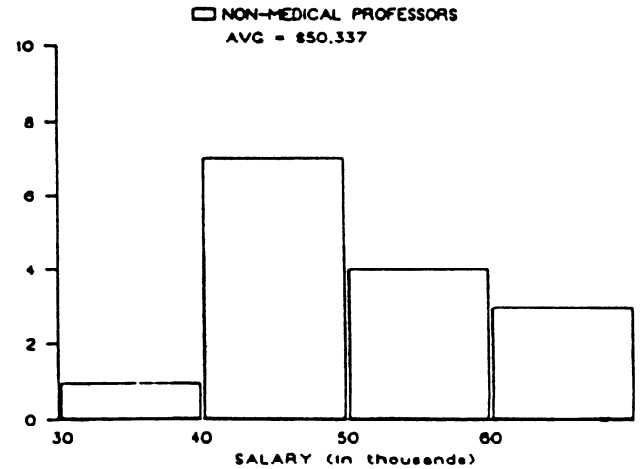
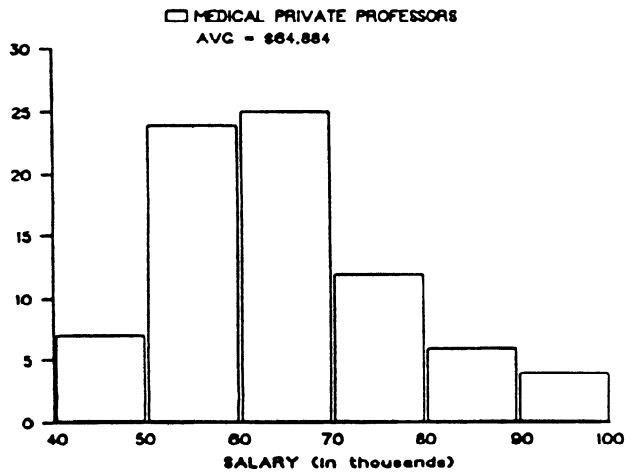
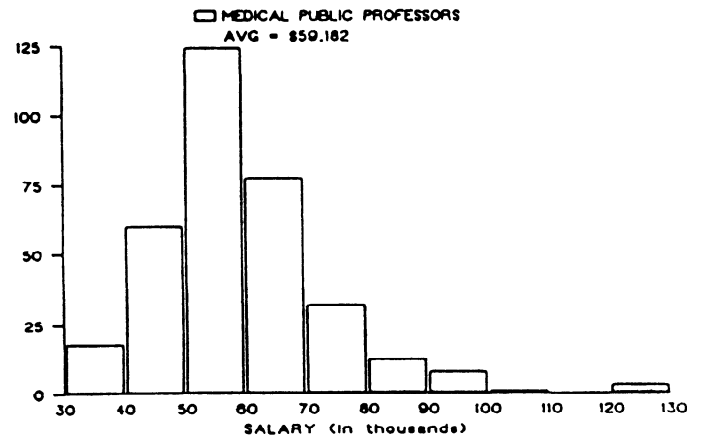
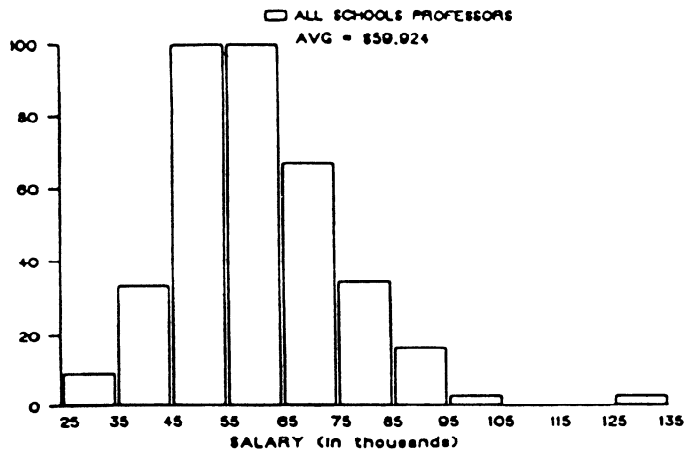
TABLE 6. Training Support

| | Total No. of Trainees Supported (% total/yr) | | | | | |
|-------------------------------------|--|----------|----------|----------|----------|----------|
| | 1986 | 1985 | 1984 | 1983 | 1982 | 1981 |
| Predoctoral | | | | | | |
| Training grants | 108 (12) | 113 (12) | 177 (16) | 189 (20) | 149 (16) | 159 (19) |
| Individual federally funded awards | 36 (4) | 32 (3) | 37 (4) | 19 (2) | 18 (2) | 14 (1) |
| Research grants | 239 (26) | 229 (24) | 248 (22) | 223 (23) | 241 (26) | 206 (24) |
| State funds | 283 (31) | 285 (30) | 281 (25) | 253 (27) | 279 (30) | 244 (28) |
| Private foundations | 34 (4) | 37 (4) | 34 (3) | 32 (3) | 17 (2) | 15 (2) |
| Institution awards | 134 (14) | 184 (19) | 221 (20) | 149 (16) | 134 (14) | 136 (16) |
| Medical scientist training programs | 19 (19) | 23 (2) | 46 (4) | 22 (2) | 33 (3) | 28 (3) |
| Other | 67 (7) | 49 (5) | 75 (7) | 46 (5) | 63 (7) | 52 (6) |
| Postdoctoral | | | | | | |
| Training grants | 88 (18) | 92 (18) | 89 (22) | 100 (20) | 110 (24) | 98 (25) |
| Individual federally funded awards | 94 (19) | 79 (15) | 88 (22) | 89 (18) | 97 (21) | 81 (18) |
| Research grants | 206 (41) | 232 (45) | 130 (32) | 197 (40) | 174 (38) | 185 (41) |
| State funds | 21 (4) | 27 (5) | 14 (3) | 17 (4) | 21 (5) | 13 (3) |
| Private foundations | 51 (10) | 39 (8) | 48 (12) | 56 (11) | 34 (7) | 42 (9) |
| Institution awards | 21 (4) | 32 (6) | 15 (4) | 18 (4) | 13 (3) | 16 (4) |
| Medical scientist training programs | 1 (<1) | 4 (<1) | 2 (1) | 5 (1) | 2 (<1) | 2 (<1) |
| Other | 15 (3) | 15 (3) | 18 (4) | 12 (2) | 11 (2) | 9 (2) |

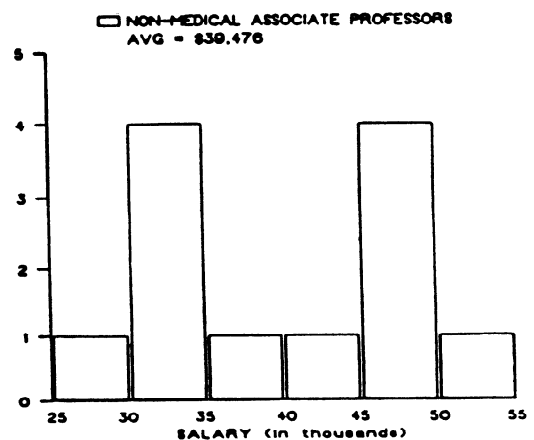
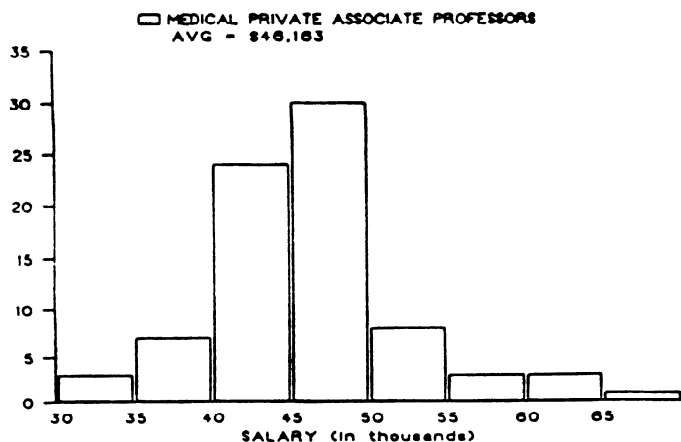
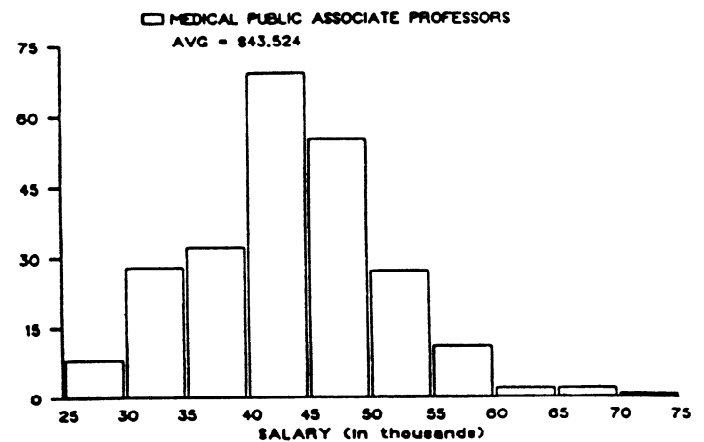
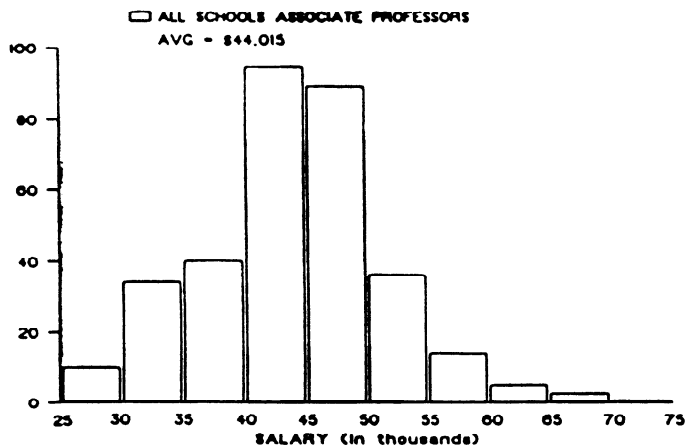
Chairmen



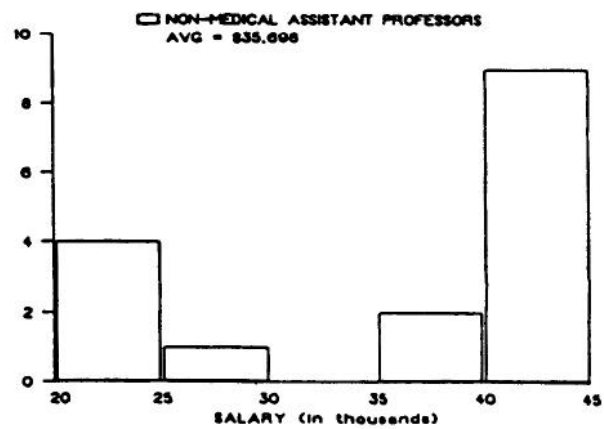
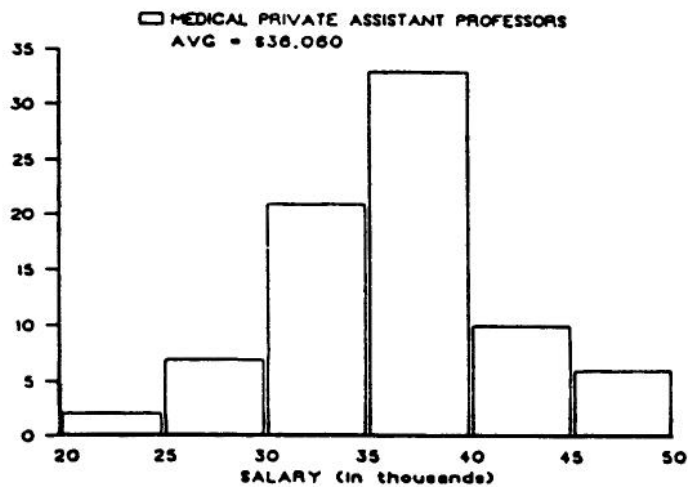
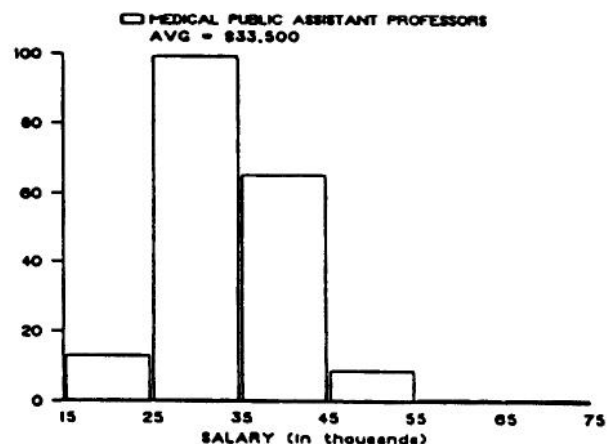
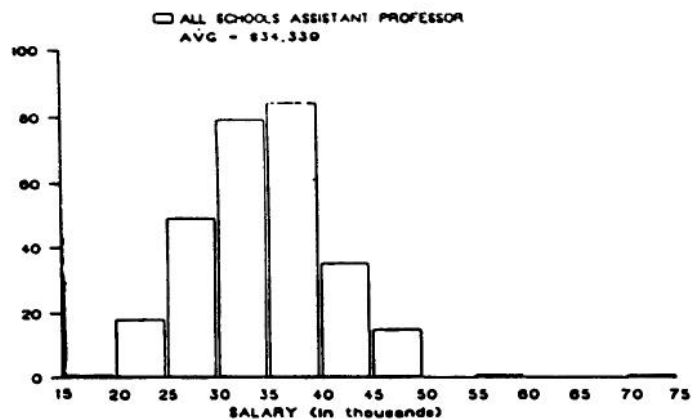
Professors



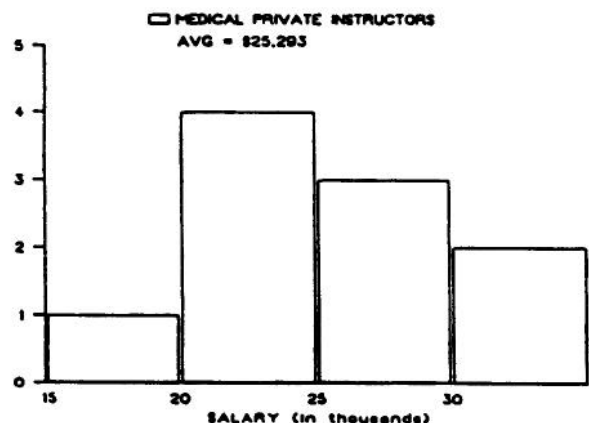
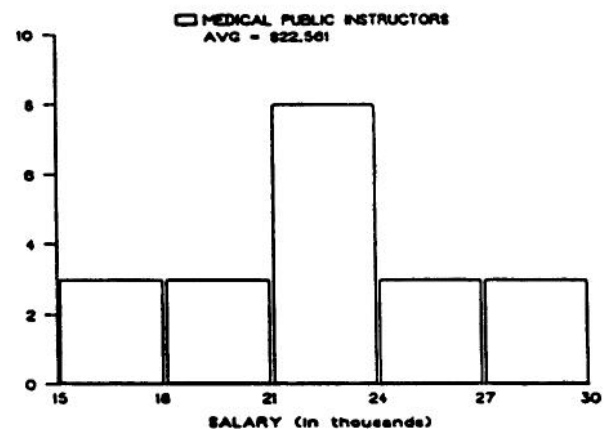
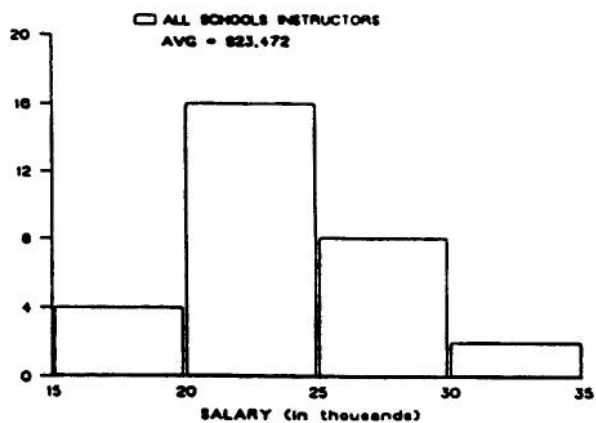
Associate Professors



Assistant Professors



Instructors



APS Membership Applications

Membership applications may be obtained from APS Membership Services, 9650 Rockville Pike, Bethesda, MD 20814. Applications received between February 1 and July 1 are considered for nomination by Council at the Fall Meeting, and those received between July 1 and February 1 are considered for nomination at the Spring Meeting of the Society.

Future Meetings

| | |
|------------------------------|------------------------------|
| 1987 | |
| APS Fall Meeting | October 11-16, San Diego |
| 1988 | |
| FASEB Annual Meeting | May 1-6, Las Vegas |
| Joint APS/ASPET Fall Meeting | October 9-14, Montreal |
| 1989 | |
| FASEB Annual Meeting | March 19-24, New Orleans, LA |
| APS Fall Meeting | October 15-19, Rochester, MN |
| 1990 | |
| FASEB Annual Meeting | April 1-6, Washington, DC |

APS Membership Statistics

Total Membership 6,761

Distribution by Employment (5,976 Respondents)

| | No. | % |
|------------------------------------|-------|----|
| Medical schools | 3,809 | 64 |
| Physiology departments | 1,909 | 32 |
| Other preclinical departments | 476 | 8 |
| Clinical | 1,353 | 23 |
| Administration | 71 | 1 |
| Hospitals and clinics | 259 | 4 |
| Veterinary schools | 131 | 2 |
| Dental schools | 49 | 1 |
| Public health and graduate schools | 121 | 2 |
| Undergraduate schools | 685 | 11 |
| Commercial companies | 177 | 3 |
| Government | 377 | 6 |
| Institutes and foundations | 204 | 3 |
| Private practice | 53 | 1 |
| Other, emeritus or inactive | 108 | 2 |

Distribution by Earned Degree (5,859 Respondents)

(Includes 352 individuals with multiple doctorate degrees)

| | No. |
|------------------|-------|
| Ph.D. | 4,083 |
| M.D. | 2,328 |
| D.V.M. | 144 |
| D.D.S. and other | 56 |

Principle Type of Work (5,976 Respondents)

| | % |
|----------------|----|
| Research | 69 |
| Teaching | 15 |
| Administration | 8 |
| Clinical | 7 |
| Other | 1 |

Statistics represent membership as of February 1987.

Distribution by Age

(Optional personal data)

| | Total respondents |
|-------|-------------------|
| 70+ | 672 |
| 60-69 | 1,119 |
| 50-59 | 1,598 |
| 40-49 | 1,911 |
| 30-39 | 994 |
| 20-29 | 52 |

Distribution by Primary Specialty (5,857 Respondents)

| | % |
|--|----|
| Cardiovascular | 22 |
| Neurophysiology | 12 |
| Respiration | 11 |
| Endocrine | 9 |
| Renal | 6 |
| Muscle and exercise | 5 |
| Electrolyte and water balance | 5 |
| Gastrointestinal, food, and nutrition | 5 |
| Cellular and tissue | 4 |
| Environmental | 3 |
| Comparative | 3 |
| Blood | 2 |
| Energy metabolism and temperature regulation | 2 |
| Pharmacology | 2 |
| Reproduction | 2 |
| All other categories (none >1%) | 9 |

Distribution by Racial Background and Heritage (Optional personal data)

| | Total respondents |
|----------------------------|-------------------|
| American Indian or Alaskan | 7 |
| Asian or Pacific Islander | 258 |
| Black | 32 |
| White | 4,248 |
| Hispanic | 82 |

US States With More Than 100 Members

(50 States plus Puerto Rico and Virgin Islands)

| California | 677 |
|----------------|-----|
| New York | 609 |
| Texas | 363 |
| Maryland | 337 |
| Pennsylvania | 320 |
| Massachusetts | 323 |
| Illinois | 305 |
| Ohio | 243 |
| Michigan | 172 |
| Florida | 170 |
| North Carolina | 165 |
| New Jersey | 163 |
| Virginia | 141 |
| Missouri | 136 |
| Minnesota | 119 |
| Connecticut | 116 |
| Wisconsin | 108 |
| Tennessee | 108 |

Distribution by Sex

(Optional personal data)

| | Total respondents |
|--------|-------------------|
| Female | 685 |
| Male | 5,545 |

APS North American Membership

| | |
|--------|-------|
| US | 5,963 |
| Canada | 198 |
| Mexico | 7 |

Canadian Provinces with 5 or More Members

| | |
|-----------------------------|-----|
| Ontario | 102 |
| Quebec | 68 |
| Alberta | 29 |
| British Columbia | 26 |
| Manitoba | 22 |
| Nova Scotia | 9 |
| Saskatchewan | 7 |
| Other provinces represented | |
| New Brunswick | |
| Newfoundland | |
| Prince Edward Island | |

APS Membership Outside North America

Countries with 5 or more members

| | |
|-----------------------------|----|
| Japan | 38 |
| United Kingdom | 34 |
| Federal Republic of Germany | 31 |
| Switzerland | 25 |
| France | 12 |
| Sweden | 11 |
| Israel | 12 |
| Australia | 14 |
| Italy | 11 |
| Belgium | 10 |
| Denmark | 9 |
| Netherlands | 8 |
| Spain and Canary Islands | 8 |
| Norway | 7 |
| Brazil | 5 |
| Venezuela | 5 |

Other countries represented

| | |
|---------------------------|--|
| Argentina | |
| Austria | |
| Bahrain | |
| British West Indies | |
| Chile | |
| Czechoslovakia | |
| Greece | |
| Hong Kong | |
| Hungary | |
| Iceland | |
| India | |
| Kuwait | |
| Lebanon | |
| New Zealand | |
| Nigeria | |
| Panama | |
| Peoples Republic of China | |
| Peru | |
| Poland | |
| Portugal | |
| South Korea | |
| Rhodesia | |
| Saudi Arabia | |
| South Africa | |
| Taiwan | |
| USSR | |
| Yugoslavia | |

APS NEWS

APS Fall Meeting San Diego, CA October 11-15, 1987

The 1987 Fall Meeting of the American Physiological Society will be held October 11-15 at the Town & Country Hotel, San Diego, California. The Latin American Association of Physiological Sciences (ALACF) and the American Society of Zoologists Division of Comparative Physiology and Biochemistry [ASZ(DCPB)] will participate in the meeting as conjoining societies.

Scientific sessions consisting of volunteered papers, symposia, tutorial lectures, and workshops will be scheduled from 9:00 A.M. to 4:30 P.M. Monday through Thursday, October 12-15. The traditional Bowditch Lecture will be delivered at 4:15 P.M. on Wednesday, followed at 5:15 P.M. by the APS Business Meeting.

APS Past President's Address

Tuesday, October 13
Speaker: F. G. Knox

Bowditch Lecture

Wednesday, October 14
Role of Xanthine Oxidase and Neutrophils in Ischemia-Induced Microvascular Injury
Speaker: D. N. Granger, Louisiana State University, Shreveport

Workshop on Integrative Study in Physiology and Medicine

Coordinators: J. Engelberg and D. C. Randall

THEME SYMPOSIUM I—Hypoxia and Hypometabolism

Organizer: W. K. Milsom

Session I: Physiological & Biochemical Correlates of Hypometabolism
Chairs: J. Fields and K. Storey

Session II: Adaptations to Hypoxia: Fish, Amphibians & Reptiles
Chairs: D. J. Randall and W. K. Milsom

Session III: Adaptations to Hypoxia in Birds, From Atmosphere to Tissue
Chairs: F. L. Powell and R. Banzett

Session IV: Adaptations to Hypoxia in Mammals & Man
Chair: J. B. West

THEME SYMPOSIUM II—Neural Principles of Pattern Generation

Organizer: R. Lydic



Cabrillo Monument—the lighthouse at the tip of Point Loma.

Session I: Common Properties Among Pattern Generating Neurons
Chair: J. Feldman

Session II: Developmental Perspectives on Rhythm Generation
Chair: J. Feldman

Session III: Central Pattern Generation and the Tasks of Daily Living
Chair: J. Feldman

Session IV: Computer Simulation of Neural Networks
Chair: E. Fetz

THEME SYMPOSIUM III—Molecular Kinetics in the Cardiovascular System

Organizers: J. M. Downey and A. E. Taylor

Session I: Models of Electrical Propagation in Cardiac Muscle
Chair: N. Sperelakis

Session II: Charge Related Selectivity in Continuous Capillary Beds
Chair: J. C. Parker

Session III: Dynamics of Endogenous Molecules in the Coronary Microcirculation
Chair: J. Bassingthwaite

Session IV: Water Exchange in the Conducting Airways
Chair: A. Wanner

Session V: Transport of Fluid and Electrolytes Across the Distal Pulmonary Epithelium
Chair: R. M. Effros

Short Course—Molecular Biology and Physiology

The 1987 Fall Meeting will offer a short course to introduce the modern developments in molecular biology to physiolo-

gists working at cellular and organ-system levels. The course will consist of one half-day tutorial session, one half-day symposium, and a series of five one-hour workshops presented by a number of biotech companies in a hands-on format. The titles of the sessions are listed below.

Organizers: S. Chien and J. J. Gargus

Tutorial Session: Molecular Biology for Physiologists
Chair: S. Chien

Symposium Session: Hormonal Regulation of Gene Expression
Chair: W. Chin

Practicum of Molecular Biology Techniques

(A series of five hands-on workshops presented in cooperation with a number of biotech companies)

Chair: J. J. Gargus

Workshop A: DNA Isolation and Quantitation

Workshop B: Restriction Enzyme Digestion and Electrophoresis

Workshop C: Southern, Northern, and Plaque Transfers: Probe Molecules and Mapping

Workshop D: Sequencing DNA

Workshop E: Vectors

Tutorial Lectures Related to Theme Symposia

Hypoxia—J. Pappenheimer

Hibernation in Mammals—H. C. Heller

Historical Perspectives on Pattern Generation—T. H. Bullock

Workshops Related to Theme Symposia

Limits of Gas Exchange and Transport in Invertebrates

Neurophysiological Techniques: Tissue Slice Preparation

Neurophysiological Techniques: Intracellular and Extracellular Recording In Vivo

Patchclamp Methods

An Introduction to Modeling Biological Systems on Personal Computers

Computer Analysis of Indicator Dilution Curves

Additional Sessions

The Medical Physiology Curriculum—Where We Are and Where We Are Going
Chair: R. D. Carlin

Liaison With Industry Symposium on Employment Opportunities for Physiologists

Chair: S. Flaim

Humoral Factors on the Cardiovascular Control (ALACF)

Chair: R. Rosas

Gametes Transport

Chair: E. Bustos-Obregon

Full-Text Storage of APS Journals

Use of computers in the research laboratory has had a strong impact on the conduct of research and processing data. Computers also have had a growing impact on scientific communication. Several years ago two commercial companies, Mead Data Central and BRS/Saunders, began programs for the full-text storage of biomedical journals and their retrieval online. Each of the retrieval systems is based on searching all of the words in the text, not just titles or key words. The companies began by entering journals with a medical-clinical orientation but planned to add basic science journals later. In November 1985 the Society signed a license agreement with BRS/Saunders for the *Journal of Applied Physiology* and the respiratory system section of the *Handbook of Physiology*. Later when BRS/Saunders expressed an interest in *AJP: Cell Physiology* the agreement was amended to include the *American Journal of Physiology*.

Material is usually stored in the BRS/Saunders system, called Colleague, by converting tapes used to drive composition equipment for the printed hard copy of the journals. Work began in 1985 on converting the tapes from Waverly Press for the *Journal of Applied Physiology*. Much effort was expended by APS and BRS/Saunders in finding the best way to display the complex symbols for respiratory physiology, mathematical expressions, and so forth in a system that is unable to handle subscripts, superscripts, Greek letters, and various typefaces. The January 1986 issue was finally approved for public availability in July. However, delays developed in bringing further issues to releasable condition.

People in the Publications Office worked extensively and diligently with the technical people at BRS/Saunders to overcome these problems. Unfortunately, changes in the management and direction of BRS/Saunders have led to suspension of this activity, at least for the present. BRS has bought out W. B. Saunders' interest in the company and is now examining its various products and overall focus. As part of this effort, BRS has decided to delay further work on developmental, non-income-generating aspects of its operation, including the *Journal of Applied Physiology* and most of its basic science journals. APS and BRS hope that this activity may resume at some future date.

The Publications Committee recognizes the potential importance of such systems not as substitutes for printed journals but as sophisticated aids to the retrieval of

scientific information. It has also signed a license agreement with University Microfilm International to store the *American Journal of Physiology*, *Journal of Applied Physiology*, and *Journal of Neurophysiology* on optical discs that can be viewed on a screen or as hard copy from a facsimile machine. This system does not have search capability for all words in the text; however, it does have the added attraction of using the journal pages directly, and thus figures, tables, and complicated mathematics are reproduced as they originally appeared.

The Committee will continue to work with interested companies such as those mentioned above but would also like your ideas on products or approaches that might improve scientific communication using such new technologies. Please send your suggestions to Paul C. Johnson, Chairman, Publications Committee, 9650 Rockville Pike, Bethesda, MD 20814.

P. C. Johnson, Chairman
Publications Committee

Section Report

Comparative Physiology

The Comparative Physiology Section held its annual business meeting at the APS Fall Meeting in New Orleans. At the business meeting, M. Roger Fedde assumed the position of chairman of the Section, Donald C. Jackson became past chairman, and William H. Dantzler was announced as the new councillor. Larry I. Crawshaw and William K. Milsom continue as Program Advisory Committee representative and secretary, respectively, and Blake Reeves is the section representative to the Section Advisory Committee.

A number of issues received consideration at the business meeting.

1. The formation of a standing Program Committee to assist the program representative in soliciting suggestions from the membership. It was proposed that suggestions be solicited sufficiently far in advance that they could be distributed to the membership for comments before being presented to the APS Program Advisory Committee by our representative.

2. The formation of a Nominating Committee, chaired by the past-chairman of the Section, to solicit candidates for executive positions as they become vacant. There was also a suggestion that the terms of office for Section chairman be lengthened to three years. This would make his term of office consistent with both those of the Program Advisory Committee representative and secretary as well as with that of the Section Advisory Committee repre-

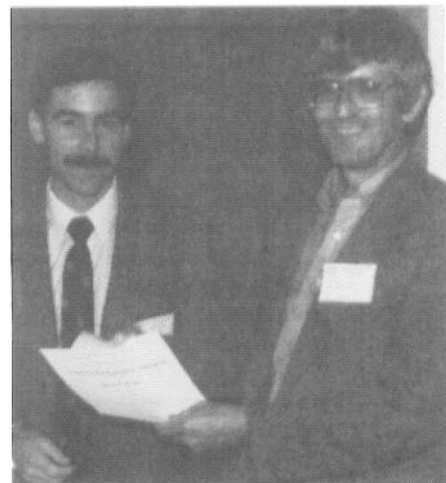
sentative currently being proposed under amendments to the Society Bylaws. This suggestion will be formulated as a proposal to be distributed to the section membership sometime in the spring.

3. The primary commitment of the Section to the Fall APS Meeting rather than the Spring FASEB Meeting. It was decided that this issue needed the input from the section membership and it was suggested that a written poll be taken of the membership to obtain their views on this matter.

The Fall Meeting of the APS in New Orleans contained 10 symposia sessions cosponsored by the Comparative Physiology Section and three contributed paper sessions. There were eight contestants for the Scholander Award (best abstract and presentation in comparative physiology by a young investigator at the Annual Fall Meeting of the APS), which was won by Dr. James H. Jones. Jim received his B.S., B.A., and M.S. degrees from the University of Arizona and his Ph.D. from Duke University in 1979. He proceeded from there to complete a D.V.M. at Colorado State University in 1983 and did postdoctoral studies at Harvard University until 1986. He is currently an Assistant Professor in the Department of Physiological Sciences in the School of Veterinary Medicine at the University of California, Davis. Jim was presented with the Scholander Award by Don Jackson, the Chairman of the Section at the Section Luncheon. The judges for the award were impressed by the overall high standard of all of the contestants.

Members of the APS and friends of Professor P. F. Scholander are encouraged to contribute to the Scholander Award Fund. Contributions are tax deductible and checks should be made payable to the American Physiological Society with a notation "Scholander Award Fund."

W. K. Milsom, Secretary



James H. Jones (left) receiving Scholander Award from Donald C. Jackson (right).

Public Affairs Workshop

Two successful efforts in rebuffing attempts by animal rights advocates to prohibit the release of unclaimed pound animals to research and educational institutions were described at the Public Affairs Committee workshop during the APS Fall Meeting in New Orleans.

Dr. David J. Ramsay of the University of California School of Medicine at San Francisco and Dr. Arthur C. Guyton of the University of Mississippi Medical Center at Jackson discussed how their institutions met the challenges in Mendocino County and Jackson, respectively. Dr. Richard L. Malvin of the University of Michigan School of Medicine and chairman of the Public Affairs Committee opened the workshop program with an overview of the animal rights movement and their efforts to halt the release by local pounds of any unclaimed animal for any purpose other than pet adoption.

Malvin noted that at this time 11 states have enacted legislation blocking the release of unclaimed animals by local pounds and that one state, Massachusetts, now has legislation that prohibits any research with pound animals. Moreover, new state initiatives to close the pounds to researchers as well as a multitude of initiatives by local humane societies and an attempt to secure a federal law can be expected in 1987, he added.

It is possible, Malvin said, that the majority of the people supporting local humane societies are individuals who are concerned with the care and treatment of animals but who also support biomedical research that requires the use of animals despite the stated policies of such organizations. However, their support of animal rights activities is inimical to their own views as well as those of the scientific community.

Although these groups publicly claim that they are not antivivisection organizations, their ultimate goal is the elimination of the use of animals in research. This is evident from their policy statements. For example:

"Eliminating animals for biomedical research and testing has been the goal of the Humane Society since its founding 28 years ago." *Humane Society News*, 1982.

"Never appear to be opposed to animal research, claim that your concern is only about the source of animals used." The Humane Society of the United States.

"The way to invent artificial organs and a way to develop transplant procedures [is by] using individuals who have been declared brain dead but whose bodies are

still functional. Now that is something we would be comfortable with, rather than an animal that can suffer." The Humane Society of the United States.

"Animal liberationists do not separate the human animal so there is no rational basis for saying that a human being has special rights. A rat is a pig is a dog is a boy." People for the Ethical Treatment of Animals.

"The Michigan Humane Society is against live animal research, no matter where the animals are taken from." Michigan Humane Society, 1980.

One result of such policies is that it no longer is possible to obtain unclaimed animals for research from most of the pounds operated by humane societies. This is the case in San Francisco, where the university has to obtain unclaimed dogs from neighboring communities, such as Mendocino County. An effort to close this source to the university led to a public referendum, which was defeated.

Ramsay described a six-point action plan that was used by the university to defeat the proposal to close the pound. The six points follow.

- Time: An institution must have the time to organize an effective campaign and to get both information and answers to questions to the electorate. The university had six months before the referendum.
- Local involvement: The university involved local physicians and voluntary health groups in the issue and invited all interested parties to the medical center to inspect its facilities and talk to the researchers.
- Identified spokesperson: One individual has to be identified as the institution's spokesperson for the purpose of talking with political figures and their staffs. This individual must have the ability to be involved in political debate and must be granted a significant amount of time for the purpose.
- Responsiveness: Regardless of the number of requests for information or a speaker, all requests must be honored. If only three people are at a debate, somebody from the university participated. What is important is that the public knows that researchers are willing to get out of their laboratories and present their case.
- Honesty: Nothing can be more damaging than to have an unpleasant experience hushed up, only to appear later in the newspapers. It is absolutely necessary to recognize any potential embarrassing situation and should it happen, to admit it clearly and correct the matter.
- Know the local issues: Many community

pounds receive a moderate proportion of their budgets from unclaimed animals sold for research. It is of benefit to the research institution to pay a sufficient amount per dog or cat so that the local pound is aware of the contribution to their budget by the research institutions. The university voluntarily paid two times more for dogs than it had paid in the past. Recognition of this subsidy made the community less willing to cut off that source of funds.

Guyton described a similar situation in Jackson, where the pound was closed without warning. At first no effort was made by the university to repeal the action because unclaimed animals were still available from other sources. However, the next step of the animal rights advocates was to block the alternative sources, thus causing the supply to decrease, the prices to soar, and a reduction or stoppage of research by the university.

The university was successful in getting the commissioners to reconsider their hasty action and the pound was reopened. However, animal rights activists, through a campaign of letters to the editor and to other public figures, were able to bring the issue once more before the commissioners. Once again the issue had to be fought.

With time to organize, the university began its campaign to keep the pound open, stressing that the research community is substantial in Jackson. It contributes a significant number of jobs for the community, bringing in large sums of money, and that retrenchment of research would have a negative impact on community employment. At a public hearing the university used the testimony of patients who benefited from research that required the use of unclaimed pound animals.

The result of this effort was a 6-1 vote to keep the pound open. Moreover, the results of both the California and Mississippi efforts show that when the research community is willing to get out of the laboratory and speak directly to the public and elected officials about the need for unclaimed pound animals for purposes of research and education, the animal rights initiatives can be defeated. Where the research community does not challenge the issue, the animal rights activists win.

Richard L. Malvin, Chairman
Public Affairs Committee

(Continued on p. 30)

Referenda, General Assembly Votes Uphold Pound Release Laws in Four States

The practice of releasing unclaimed pound animals to research institutions has been reaffirmed by public referenda in Arizona and Florida and by general assembly committee decisions in Montana and New Mexico.

These actions in early 1987 blunted the initial efforts of animal rights coalitions seeking enactment of local, state, and federal laws that would prohibit pounds from releasing any animal for any purpose other than pet adoption. Similar legislative initiatives are still under consideration, however, in several municipalities and state assemblies and in the US House of Representatives.

In Arizona, voters in Sierra Vista approved by a 2-to-1 margin to continue the release of unclaimed pound animals to the University of Arizona, which uses about 700 cats and dogs annually for biomedical research.

The vote was a major setback for the animal rights coalition that had focused much attention on the referendum in the probability that it could be used as a model for similar actions in other states. The coalition included the National Antivivisection Society, National Coalition to Protect Our Pets, People for the Ethical Treatment of Animals, Cochise County Defenders of Animals, Tucson Humane Society, and the Arizona Society for the Prevention of Cruelty to Animals.

The University along with the local and state medical societies and the Incurably Ill for Animal Research met the challenge by conducting a public education campaign that included media interviews and informational brochures.

A bill in the Montana House of Representatives was defeated by a 15-to-5 committee vote following a day of testimony from both sides. The bill, cosponsored by more than 20 legislators, would have banned the transfer of unclaimed pound animals to research facilities, animal dealers, and pet stores. The ban would have applied to all animals regardless of whether they were obtained inside or outside of the state.

In New Mexico a bill "to ensure that lost or unwanted animals that end up in the pounds will never be sold or donated to research facilities for the purpose of scientific or biomedical experimentation or educational demonstrations" was rejected

in the General Assembly by a 5-to-3 senate committee vote, thus continuing the practice of making unclaimed animals available for research.

Nearly 70% of the electorate in the Tampa area voted to continue the release of unclaimed animals by the local pound. The Tampa facility is the only pound in Florida releasing unclaimed animals to research institutions, primarily to the University of South Florida.

Jurisdictions having legislation involving the use of unclaimed animals:

- **Washington**—A House bill is being considered stating that "no city, town, county, special purpose district, humane society or society for the prevention of cruelty to animals may sell any animal for use in medical research to a research institution or to any other purchaser."
- **Wyoming**—A bill prohibiting any individual from providing a research facility with any live animal as well as prohibiting any research facility from accepting any live animal. The bill states that "a person, firm, corporation, association, animal dealer, medical college, university or any other school or teaching facility accepting any live animal from any person or any animal shelter, pet dealer, or other source for the purpose of animal experimentation commits cruelty to animals." Violation would be punishable by imprisonment of up to one year and a fine of \$1,000 or both. Currently, Wyoming's animal cruelty law makes no mention of research and the disposition of unclaimed pound animals is left to local jurisdictions.
- **Minnesota**—A bill to exclude cats and dogs from the current law that requires that unclaimed animals be made available to licensed research facilities.
- **Missouri**—A bill that would require research facilities, kennels, pet shops, dealers, and commercial breeders to obtain annually a license and that the premises of each licensee be open for inspection. Missouri currently has neither license or inspection requirements.
- **Iowa**—A proposed repeal of the law that permits institutions to obtain unclaimed dogs from pounds for use in research.
- **Oklahoma**—A bill repealing the state

law permitting research institutions to obtain unclaimed pound dogs. The bill would prohibit the acquisition of unclaimed dogs from any in any state, territory, or foreign country, or the District of Columbia for the purpose of research. Research facilities would be required to use only purpose-bred dogs.

- **Arkansas**—A bill prohibiting the humane society or municipal pound from selling, giving, or transferring any mammal to any person for the purpose of live experimentation, research, or testing.
- **Utah**—A bill that would make optional the current requirement that pounds make available to authorized institutions unclaimed animals.
- **West Virginia**—A bill prohibiting any impounded dog or cat from being made available for educational or scientific purposes.
- **Racine, WI**—The humane society has to cease providing animals to the University of Wisconsin or lose its contract with the county.
- **Louisville, KY**—Animal rights group proposal of a three-year phaseout of the sale of unclaimed animals by the pound to the University of Louisville.

A bill has been introduced in the Congress that would prevent the use of unclaimed animals by any recipient of funds from the National Institutes of Health (NIH). The proposal includes all unclaimed animal whether acquired directly or indirectly from an animal shelter or pound.

The bill, HR 778, is entitled "Pet Protection Act of 1987" and was introduced by Rep. Robert J. Mrazek (D-NY). The proposal is more restrictive than the bill he introduced in the last Congress. His original bill, which died in committee, only prohibited the use of NIH funds for the purchase of unclaimed animals. Mrazek's revised version states that anyone who uses or obtains unclaimed animals for any research purpose regardless of the source of funds used to obtain the animals shall not be eligible for funds from NIH and that any violation would mean the immediate termination of NIH funds.

(Continued on p. 30)

Animal Rights Advocates Ask US Supreme Court for Ruling on Issue of Standing

After being rebuffed by two lower federal courts, animal rights advocates have asked the US Supreme Court to grant the advocates standing, which is the recognition given by the courts to private citizens and organizations as plaintiffs with legally protectable and tangible interests at stake in litigation.

A writ of certiorari was filed with the Supreme Court by the three animal rights organizations and the seven activists who have been seeking standing in the courts for five years. The writ is a preliminary step in appealing a case to the Supreme Court. The Court now must decide if there are significant differences in the issues of law or differing lower court opinions that should be resolved and then determine whether it wants to hear the case. There is no time requirement as to when the Court has to make such decisions.

The International Primate Protection League, Animal Law Enforcement Association, People for the Ethical Treatment of

Animals, and seven individuals are seeking standing so that they can file a civil suit to gain custody of 14 monkeys confiscated by police in a September 1981 raid of a Silver Spring, MD, research laboratory. The monkeys are at the Delta Regional Primate Center in Louisiana.

In 1982 the advocates filed suit in a federal district court seeking the custody of the monkeys on the grounds that the advocates have a bonding with the monkeys by virtue of weekly visits and by providing fresh fruits, toys, and a television set to improve the primates well being and environment while they were housed at the NIH animal facility at Poolesville, MD. The monkeys were not moved to the Louisiana facility until last summer.

A federal magistrate, in reviewing the original suit, recommended that it be dismissed because animal rights advocates do not have standing in the courts. The magistrate's recommendation was upheld by the district court judge. The advocates appealed that decision to the US Court of Appeals, which reaffirmed last September the district court's ruling.

During the process before the court of appeals, 68 national scientific and educational organizations, including APS, jointly filed an amicus curiae brief (friend of the court) stating why the lower court's decision not to grant standing was correct. APS

and several other societies have jointly filed a brief with the Supreme Court giving reasons why the lower standing should not be given to animal rights organizations and activists.

Administration Drops Proposal to Eliminate APHIS Inspections

For the first time in four years the Administration has dropped its proposal to remove the requirement from the Animal Welfare Act that the inspection of laboratory animal facilities be conducted by the US Department of Agriculture's Animal and Plant Health Inspection Service (APHIS).

In presenting to the Congress the Administration's budget proposal for FY 1988, the President requested \$4.6 million for the APHIS inspection service, the same amount of funds the Congress provided in FY 1985. The appropriation for the current fiscal year, however, is \$5.9 million.

Although the budget request is less than the current funding level, it marks the first time since FY 1983 that the President has not recommended that the inspection of laboratory animal facilities be given to the states and to local humane societies.

William M. Samuels

Ohio Physiological Society First Annual Meeting

The Ohio Physiological Society (OPS) held its first annual meeting with 60 attendees at Wright State University, Dayton on November 21, 1986. The main lecture, "The Role of Calcium in Cellular Function," included presentations by Antonio Scarpa, Nicholas Sperelakis, George M. Somjen, and Jackie D. Wood. Shu Chien, APS Councillor, and Bruce Umminger, National Science Foundation, also took part in the meeting.

Newly elected officers are President Bruce Biagi of Ohio State University, and

President-Elect Antonio Scarpa of Case Western Reserve University.

Organized in May 1986 by Dr. Peter K. Lauf, its first president, as a way "to enhance and advance the field of physiology, including all of molecular, cellular, organ and organismal, basic and applied disciplines of research and to unite the physiologists for this purpose within the state of Ohio," the Society has grown to nearly 80 members. Interested physiologists are invited to become members.



Left to right: Antonio Scarpa, Peter K. Lauf, and Shu Chien.

BOOKS RECEIVED

Retinal Signal Systems, Degenerations And Transplants. E. Agardh and B. Ehinger (Editors). Amsterdam: Elsevier Biomedical, 1986, 322 pp., illus., index, \$80.00.

Hormonal and Metabolic Derangements in Renal Failure. A. Heidland, E. Quellhorst, E. Heidbreder, E. Ritz, and S. G. Massry (Editors). Basel: Karger, 1986, 216 pp., illus., index, \$79.50.

Vertebrate Endocrinology: Fundamentals and Biomedical Implications. P. K. T. Pang and M. P. Schreiber (Editors). Orlando, FL: Academic, 1986, 496 pp., illus., index, \$75.00.

Microcomputers and Physiological Simulation (2nd ed.). J. E. Randall. New York: Raven, 1986, 303 pp., illus., index, \$29.50.

Brown Adipose Tissue. P. Trayhurn and D. G. Nicholls (Editors). Baltimore, MD: Arnold, 1987, 374 pp., illus., index, \$79.50.

Cerebral Lateralization. N. Geschwind and A. M. Galaburda. Cambridge, MA: MIT Press, 1987, 283 pp., illus., index, \$29.95.

Neurobehavioral Toxicology. Z. Annau (Editor). Baltimore, MD: Johns Hopkins Univ. Press, 1987, 443 pp., illus., index, \$79.50.

Advances in Cardiology. J. J. Kellermann (Series Editor). Vol. 35: *The Anaerobic Threshold: Physiological and Clinical Significance.* L. Tavazzi and P. E. di Prampero (Vol. Editors). Basel: Karger, 1987, 158 pp., illus., index, \$79.50.

Positions Available

There is a \$25 charge per issue for each position listed. A check or money order payable to the American Physiological Society must accompany the copy. Purchase orders will not be accepted unless accompanied by payment. Ads not prepaid will not be printed. Copy must be typed double-spaced and limited to 150 words. All copy is subject to the editorial policy of *The Physiologist*. EOAAE indicates Equal Opportunity/Affirmative Action Employer and appears only where given on original copy. Copy deadline: copy must reach the APS office before the 15th of the month, 2 months preceding the month of issue (e.g., before December 15 for the February 1987 issue). Mail copy to APS, 9650 Rockville Pike, Bethesda, MD 20814.

POSITION AVAILABLE

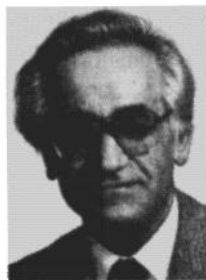
Associate or Full Professor with Tenure. The Department of Physical Education and Dance, University of Wisconsin, is seeking an Associate or Full Professor to assume the responsibilities of directing the Biodynamics (Exercise Physiology) Laboratory, teaching courses in the area of exercise physiology and/or cardiac rehabilitation, advising graduate students, and establishing a sound research program. Beginning date: August 24, 1987. A more complete job description is available from Henry J. Montoye, Biodynamics Laboratory, University of Wisconsin, 2000 Observatory Drive, Madison, WI 53706. Applications should be sent to Henry Montoye. Closing date for applications: March 16, 1987, or until position is filled. [EOAAE]

Foundation for Biomedical Research

The Foundation for Biomedical Research (FBR) provides the general public and the news media with accurate information about humane and responsible animal research. With broad-based support from the scientific community, FBR serves as a national voice—countering the emotional tactics utilized by the animal rights movement with rational dialogue on the animal research issue. Your support of the Foundation for Biomedical Research will help inform the public that animal research has been and will continue to be essential to the advancement of science and the betterment of health. All contributions to FBR are tax deductible. A contribution of \$25 will allow you to receive a quarterly newsletter on animal research issues. To contribute to the Foundation or for more information please contact FBR, 818 Connecticut Avenue, NW, Suite 303, Washington, DC 20006. Phone: (202)457-0654.

PEOPLE AND PLACES

Francis J. Haddy, M.D., Ph.D., received the American Heart Association's Scientific Achievement Award, the most prestigious medical/scientific recognition bestowed by the Association. Dr. Haddy, President of the Society in 1981 and a member since 1954, is chairman of the APS Finance Committee.



APS member **Myron Miller, M.D.,** professor and director of geriatrics and chief of the section of geriatrics at the State University of New York at Syracuse, has been appointed vice-chairman and clinical director of acute care and professor of geriatrics and medicine at Mount Sinai School of Medicine of the City University of New York. He has been a member of APS since 1972.

Helen Ranney, chair of the Department of Medicine at the University of California, San Diego, has been named Distinguished Physician of the Veterans Administration.

Dr. Ranney, a member since 1972, will continue as professor of medicine at the medical school.

Roger A. Davis, Ph.D., professor of physiology at Louisiana State University Medical School, has moved to the University of Colorado School of Medicine as professor of medicine and physiology. Dr. Davis was elected to membership in 1983.

APS member **Martin J. Tansy, Ph.D.,** professor of physiology at Temple University, has been appointed dean of the School of Dentistry.

Newly elected member **Laurence Y. Cheung, M.D.,** has been named chairman of the Department of Surgery at the University of Kansas Medical Center School of Medicine. Dr. Cheung was formerly professor of surgery at Washington University School of Medicine.

Lyne C. Weaver, D.V.M., Ph.D., associate professor at Michigan State University, has moved to John P. Roberts Research Institute, London, Ontario, Canada. Dr. Weaver, an APS member since 1979, is a member of the Society's Membership Committee.

News From Senior Physiologists

Letters to Roy Greep:

Orville Horwitz, professor of medicine and pharmacology at the University of Pennsylvania, sends the Committee a copy of the fifteenth annual report of the Foundation for Vascular-Hypertension, of which he is president. He and his associates in the Foundation have done much to establish their hypothesis that chemical and physical alterations of the intima of blood vessels are largely responsible for arterial diseases that lead to stroke and heart attack. They are now planning an extensive research program aimed toward preventing the occurrence of arterial diseases with the groundhog (woodchuck) as an animal model because it develops a form of arteriosclerosis similar to that of humans but in about six years instead of sixty.

Helen Tepperman, Emeritus Professor of Pharmacology at Syracuse, writes that she and her husband Jay "continue to enjoy collaborating in retirement as we did before." For the first six months after closing their laboratory in June 1985, they were occupied in writing up the last results and completing the latest edition of "Metabolic and Endocrine Physiology." Since then they have been reading widely, traveling (in Spain), visiting children and grandchild-

dren scattered across the country, and cross-country skiing. As a volunteer at the small but growing local science museum, she has taken on the assignment of helping to prepare science teaching materials for elementary school teachers—"a new perspective and a challenge for me. I'm having a marvelous time."

Joseph Meites, Professor Emeritus of Physiology at Michigan State University, thanks the Committee for its note of congratulations on his 73rd birthday and writes: "Last year [1986] was probably my biggest year for travel to meetings, my last 'hurrah' so to speak." He presented lectures at one meeting in Switzerland, three in Italy, and one in Cuba as well as two in the U.S. and one in Canada. Best of all was a small conference in Rome where he and his wife participated in an audience with the Pope. He is now on the final year of an NIH grant from the National Institutes on Aging and has one graduate student remaining (his 39th Ph.D. candidate) and a postdoctoral fellow (his 37th). Much of the research of his laboratory for the past 15 years has been reviewed by former students and colleagues in his edited volume *Neurophysiology of Aging* published by Plenum Press in 1983.

APS Sustaining Associate Members

The Society gratefully acknowledges the contributions received from Sustaining Associate Members in support of the Society's goals and objectives.



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Davis
Waverly Press, Inc.
Wyeth Laboratories

* Second Century Corporate Founders

ANNOUNCEMENTS

Scientific Meetings and Congresses

95th International Conference on Noise in Physical Systems, Montreal, Canada, May 25-29, 1987. *Information:* Dr. Carolyn Van Vliet, Centre de recherches mathématiques, Université de Montréal, C.P. 6128, Succ. "A", Montreal, Canada H3C 3J7.

69th Annual Meeting of the Endocrine Society, Indianapolis, IN, June 10-12, 1987. *Information:* The Endocrine Society, 9650 Rockville Pike, Bethesda, MD 20814.

XIV World Congress of Anatomic and Clinical Pathology, Washington, DC, June 21-26, 1987. *Information:* Ms. Pamela Cramer, College of American Pathologists, 5202 Old Orchard Road, Skokie, IL 60077-1034.

New York Academy of Sciences Conference of Biology of the Leukotrienes, Philadelphia, PA, June 29-July 1, 1987. *Information:* Conference Department, The New York Academy of Sciences, 2 East 63rd Street, New York, NY 10021.

Society for Neuroscience, New Orleans, LA, November 16-21, 1987. *Information:* Society of Neuroscience, 11 Dupont Circle, NW, Suite 130, Washington, DC 20036.

The American Society of Zoologists, American Microscopical Society, Animal Behavior Society, The Crustacean Society, International Association of Astacology, and Society of Systematic Zoology, New Orleans, LA, December 27-30, 1987. *Information:* Mary Adams-Wiley, Executive Officer, American Society of Zoologists, Box 2739, California Lutheran University, Thousand Oaks, CA 91360.

4th International Congress of Cell Biology, Montreal, Canada, August 14-19, 1988. *Information:*

Information: Congress Secretariat, 4th International Congress of Cell Biology, National Research Council of Canada, Ottawa, Ontario, Canada K1A 0R6

8th International Congress of Endocrinology, Kyoto, Japan, July 17-23, 1988. *Information:* The Secretary, 8th International Congress of Endocrinology, % Seiren Kaikan, Koujinbashi Nishizume, Kamigyo-ku, Kyoto 602, Japan.

XVI International Congress of Genetics, Toronto, Canada, August 20-27, 1988. *Information:* Congress Secretariat, XVI International Congress of Genetics, National Research Council of Canada, Ottawa, Ontario, Canada K1A 0R6

NSF Announces Research Opportunities for Women

The National Science Foundation's mandate to ensure the vitality of the nation's scientific enterprise includes concern for the quality, distribution, and effectiveness of the human resource base in science and engineering. The Foundation seeks to encourage full utilization of all highly qualified scientists and engineers. Because women are underrepresented in all disciplines, a number of activities are directed at increasing the numbers of women as full participants in the mainstream of the nation's research enterprise. These activities include

- **Standard Research Awards.** Women scientists and engineers are eligible to apply for grants in all of the Foundation's programs and are encouraged to do so.
- **Research Initiation Awards** for women who have not previously received Federal research support or who are returning to research activities after a career interruption. These one-time awards, incorporating the former Research Opportunities for

Women (ROW) program, provide support for research projects that are given special attention by programs.

- **Research Planning Grants**, limited in amount and duration, to help women develop competitive research programs.
- **Career Advancement Awards** to enable women to increase their research productivity.
- **Visiting Professorships for Women Program** to enable experienced women scientists and engineers to undertake advanced research and teaching at host institutions where they can also provide guidance and encouragement to other women seeking to pursue research careers.

The Foundation recognizes that the representation of women and the barriers to their full participation vary considerably among the disciplines of science and engineering. For this reason, responsibility for all of the activities listed above (except for the Visiting Professorships for Women Program) is located in the disciplinary programs of the Foundation. Thus, eligibility criteria (including years of experience after the Ph.D.) and the extent to which any of these specific activities is supported may vary among the directorates of NSF. Applicants are therefore strongly urged to discuss the proposed research with the appropriate program officer before submitting a proposal.

Inquiries related to the area of proposed research should be directed to the NSF program officer in the applicant's field of interest. Programs and telephone numbers are listed in *Grants for Scientific and Engineering Research* (NSF 83-57). General inquiries about the awards described in this announcement may be made to the Research Opportunities for Women Coordinator, Room 1225, National Science Foundation, Washington, DC 20550. Phone: (202)357-7734.