

## CONTENTS

	Page
Actions Taken at Spring Business Meeting .....	53
Current Schedule of Future Meetings .....	54
Membership Status .....	55
Sixth International Congress of Transplantation Society .....	59
1975 Fiscal Report .....	60
Travel Grant Program for 1977 International Congress .....	62
Symposium on Radioactive Microsphere Method .....	62
Ray G. Daggs Award .....	63
Parathyroid Gland Completes Handbook Section on Endocrinology .....	64
The Journals - 1976 .....	65
APS Journals - Statements of Scope .....	67
Cumulative Indexes to AJP and JAP .....	71
Sixteenth Annual Hanford Biology Symposium .....	72
1976 Conference on the Neurohypophysis .....	72
APS Fall Meeting - Philadelphia .....	73
BIOSIS Sponsored Joint Symposium .....	76
Audiovisual Educational Units in Physiology .....	78
The Physiology Teacher .....	78
Laboratory Experiments .....	79
President's Report.....	81
Notice to Sponsor and Applicants for Membership in APS .....	85
Report on Activities of the Education Committee .....	87
Program Committee Report .....	93
Interunion Commission on Comparative Physiology.....	95
News from Senior Physiologists .....	97
George Hoyt Whipple .....	99
Giovanni Maria Lancisi International Prize .....	101

Subscribers to The Physiologist will note that the April issue of The Physiology Teacher and a supplement, "Abstracts of Review Articles and Educational Materials in Physiology" are included with this issue.

## ACTIONS TAKEN AT SPRING BUSINESS MEETING

Anaheim, California, April 13, 1976

ELECTIONS - The results of the Election of Officers was announced as follows:

President-Elect - Dr. William F. Ganong to take office July 1, 1976.

Councillors - Dr. Walter C. Randall for a four-year term beginning July 1, 1976.

Dr. Francis J. Haddy to complete the unexpired term of Dr. Ganong (3 years).

All candidates for membership and associate membership nominated by Council were elected to membership.

AMENDMENT TO BYLAWS - An Amendment to the Bylaws proposed and publicized in the February 1976 issue of The Physiologist providing for a category of "Corresponding Member" for physiologists residing outside North America, was passed by a large majority ballot. (157 for - 6 against).

INTERSOCIETY PROGRAMMING OF CONTRIBUTED PAPERS AT FASEB MEETING -

By informal show of hands, a large majority of members present expressed a preference for intersociety programming as compared with individual society programming. (This method of programming was tried for the first time at this meeting. It had been proposed by the Meetings Committee of FASEB several years previously).

## CURRENT SCHEDULE OF FUTURE MEETINGS

~~1976 Fall - University of Pennsylvania, Philadelphia - August 16-19~~

1977 - International Physiological Congress - Paris, France - July 18-23

~~1977 Spring - Chicago, Illinois - April 5-8~~

1977 Fall - Hollywood Beach, Florida - October 9-14

1978 Spring - Atlantic City, New Jersey - April 9-14

? 1978 Fall - St. Louis, Missouri - ~~October 22-27~~ *Nov 5*

1978 Fall - Campus Specialty Meeting - Michigan State - Categorical  
Subject and Date to be announced

1979 Spring - Dallas, Texas - April 8-13

1979 Fall - New Orleans, Louisiana - October 14-19

1980 Spring - Anaheim, California - April 13-18

1980 Fall - Miami Beach, Florida - October 12-17

1981 Spring - Atlanta, Georgia - April 12-17

1981 Fall - Boston, Massachusetts - ~~October 4-9~~ *Nov 1-6*

1982 Spring - New Orleans, Louisiana - April 18-23

1982 Fall - San Diego, California - October ~~(dates to be announced)~~

*10-15*

## MEMBERSHIP STATUS

April 1, 1976

Regular Members	3,955
Retired Members	334
Honorary	13
Associate	553
Retired Associate	2
	<hr/> 4,857

## SUSTAINING ASSOCIATES

Abbott Laboratories	Norwich Pharmacal Co.
Burroughs Wellcome Co.	Pfizer, Inc.
CIBA-GEIGY Corp.	A. H. Robins Co., Inc.
Grass Instrument Co.	Smith, Kline and French
Hoechst Pharmaceutical Co.	Laboratories
Hoffman-LaRoche, Inc.	Warner-Lambert Research
Eli Lilly and Co.	Institute
Merck Sharp & Dohme Research	Williams & Wilkins Co.
Laboratories	Wyeth Laboratories, Inc.

## DEATHS SINCE 1975 FALL MEETING

Daniel A. Brody - 10/7/75 - Dobbs Med. Res. Inst., Univ. of Tenn.  
 Harold C. Bradley (R) - 1/4/76  
 Detlov W. Bronk (R) 11//75- Rockefeller Univ., New York  
 Harold W. Chalkley (R) - 9/25/75  
 John Emerson Davis (R) - 11/3/75  
 John Ferguson (R) - 1/12/76 - Creighton Univ., Omaha  
 Fred R. Griffith, Jr. (R) - / / / - State Univ. of New York, Buffalo  
 Julius T. Hansen (Associate) - 9/ /73  
 Harald G. O. Holck (R) - 10/12/75 - Univ. of Nebraska, Lincoln  
 Alan D. Keller - 12/4/75  
 Joseph T. King (R) - 3/24/76 - Univ. of Minnesota, Minneapolis  
 Max Kleiber (R) - 1/5/76 - Univ. of California, Davis  
 Harold Lamport - 12/27/75 - City University of New York  
 Joseph J. Pfiffner (R) - 8/13/75 - Wayne State Univ., Detroit  
 Caroline tum-Suden - 1/24/76  
 George H. Whipple (R) - 2/2/76 - Univ. of Rochester Sch. Med. & Dent.

## 50-YEAR MEMBERS

Edward F. Adolph	Harold L. Higgins
Walter C. Alvarez	Andrew C. Ivy
William R. Amberson	Dennis E. Jackson
Olaf Bergeim	Norman M. Keith
Charles H. Best	Nathaniel Kleitman
McKeen Cattell	Theodore Koppanyi
Hallowell Davis	Chauncey D. Leake
Esther M. Greisheimer	David Marine
Alrick B. Hertzman	Jesse F. McClendon

Grayson P. McCouch  
 Walter R. Miles  
 Frederick R. Miller  
 Ann S. Minot  
 Jean Redman Oliver  
 Samuel E. Pond  
 David Rapport

Alfred C. Redfield  
 Curt P. Richter  
 Andrew H. Ryan  
 Joseph T. Wearn  
 Harvey L. White  
 Rosalind Wulzen

#### NEWLY ELECTED MEMBERS

The following, nominated by Council, were elected to membership in the Society at the Spring Meeting, 1976.

ABBOTT, William M.: Dept. Surgery, Mass. Gen. Hosp., Boston  
 ARMSTRONG, Robert B.: Biol. Dept., Boston University, Boston  
 BAHLER, Alan S.: Div. Cardiol., Mt. Sinai Sch. Med., New York  
 BARKER, Winona C.: Natl. Biomed. Res. Fndn., Georgetown Univ.  
 BELLER, George A.: Cardiac Unit, Mass. Gen. Hosp., Boston  
 BETZ, William J.: Dept. Physiol., Univ. of Colorado Med. Ctr.  
 BITO, Laszlo Z.: Dept. Ophthalmol., Columbia Univ., New York  
 BITTAR, Neville: Univ. of Wisconsin Med. Sch., Madison  
 BLANTZ, Roland C.: Nephrology, VA Hosp., San Diego  
 BOND, Guy H.: Dept. Physiol., Kirksville Coll. Osteopathic Med.  
 BRUMLEVE, Stanley J.: Dept. Physiol., Univ. of North Dakota  
 CAMPBELL, Constance S.: Dept. Biol. Sci., Northwestern Univ.  
 CARLSON, Gerald M.: Dept. Physiol., Univ. of Pennsylvania Sch. Med.  
 CARON, Marc G.: Lab. Molecular Endocrinol., CHUL, boul. Laurier,  
 Ste-Foy, Quebec  
 CHAN, Yun-Lai: Dept. Physiol., Yale Univ. Sch. Med., New Haven  
 CRANDALL, Edward D.: Dept. Physiol., Univ. of Pennsylvania  
 CRUCE, William L.R.: Dept. Anat., Howard Univ., Washington, D.C.  
 D'ARRIGO, Joseph S.: Dept. Physiol., Univ. of Hawaii, Honolulu  
 DAVIES, Richard O.: Dept. Animal Biol., Univ. of Pennsylvania  
 DENNISTON, Joseph C.: US Army Res. Inst. Environ. Med., Natick  
 DOWELL, Russell T.: Marine Biomed. Inst., Galveston, Texas  
 DREWES, Lester R.: Univ. of Wisconsin Sch. Med., Madison  
 EVANS, Delbert E.: Armed Forces Radiobiol. Res. Inst., Bethesda  
 FANELLI, George M., Jr.: Merck Inst. Therap. Res., West Point  
 FELIG, Philip: Yale University, New Haven, Ct.  
 FENSTERMACHER, Joseph D.: Natl. Cancer Inst., NIH, Bethesda  
 FLAHERTY, John T.: Div. Cardiol., Johns Hopkins Hosp., Baltimore  
 FORD, Johnny J.: US Meat Animal Res. Ctr., Clay Center, Nebraska  
 FOREMAN, Robert D.: Marine Biomed. Inst., Galveston, Texas  
 FRAY, John C. S.: Dept. Physiol., Harvard Med. Sch., Boston  
 FREEMAN, Ronald H.: Univ. of Missouri Sch. Med., Columbia  
 GAIL, Dorothy B.: Pulmonary Div., VA Hosp., Washington, D.C.  
 GLASER, Roger M.: Dept. Physiol., Wright State Univ., Dayton, Ohio  
 GEUMEI, Aida M.: Dept. Internal Med., Univ. Texas Southwestern  
 GOLDFARB, Roy D.: Dept. Physiol., Albany Medical Coll., Albany  
 HAAS, Francois: Pulmonary Physiol. Lab., New York Univ. Med. Ctr.  
 HARGENS, Alan R.: Dept. Med., Univ. California, San Diego  
 HOWE, Richard C.: Dept. Physiol. & Bioeng., East Virginia Med.  
 Sch., Norfolk, Va.

- JUNCKER, David F.: Dept. Physiol., Univ. of Minnesota, Minneapolis  
JUNGREIS, Arthur M.: Dept. Zool., Univ. of Tennessee, Knoxville  
KAPLAN, Stephen M.: Dept. Physiol. & Pharmacol., New York Univ.  
KLYCE, Stephen D.: Stanford Med. Ctr., Stanford, California  
LAMB, David R.: Dept. Phys. Ed., Univ. of Toledo, Toledo, Ohio  
LaNOUE, Kathryn F.: Penn. State Univ., Hershey, Pa.  
LARIS, Philip C.: Dept. Biol. Sci., Univ. California, Santa Barbara  
LEE, Do Chil: Dept. Anesthesia, Med. Coll. of Ohio, Toledo  
LEVINE, Norman: Dept. Physiol., New York Med. Coll., Valhalla  
McBROOM, Marvin J.: Dept. Physiol. & Pharmacol., Univ. South  
Dakota, Vermillion  
McMILLAN, Donald E.: Sansum Med. Res. Fndn., Santa Barbara, Ca.  
MACHEN, Terry E.: Dept. Physiol.-Anat., Univ. California, Berkeley  
MADDAIAH, Vaddanahally T.: Dept. Pediat., Nassau County Med. Ctr.  
MAHESH, Virendra B.: Dept. Endocrinol., Med. Coll. of Georgia  
MARCUS, Melvin L.: Dept. Int. Med., Univ. of Iowa Hosps., Iowa City  
MARSH, Julian B.: Dept. Physiol. & Biochem., Med. Coll. of Penn.  
MARTIN, David E.: Sch. Allied Hlth. Sci., Atlanta, Ga.  
MARTIN, Loren G.: Univ. Illinois-Peoria, Peoria, Ill.  
MAUCK, Henry P., Jr.: Med. Coll. of Virginia, Richmond  
MILLIGAN, John V.: Dept. Physiol., Queen's Univ., Kingston, Ont.  
MILLS, Steven H.: Dept. Biol., Central Missouri State Univ.,  
Warrensburg, Missouri  
MOBERG, Gary P.: Dept. Animal Sci., Univ. of California, Davis  
MOSS, Immanuela R.: Dept. Physiol., New York Univ.  
MURTHY, Veeraraghavan K.: Univ. of Nebraska Med. Ctr., Omaha  
NEQUIN, Lynn G.: Dept. Physiol., Southern Illinois Univ., Carbondale  
CLIPHANT, Edward E.: OB/GYN, Univ. of Virginia, Charlottesville  
OLSON, Kenneth R.: South Bend Ctr. for Med. Edu., Univ. of Notre  
Dame, Notre Dame, Ind.  
ORR, James A.: Dept. Physiol. & Cell Biol., Univ. of Kansas, Lawrence  
PACE, John B.: Dept. Physiol., Loyola Univ., Maywood, Ill.  
PARADISE, Norman F.: Dept. Biophys. Sci., Mayo Grad. Sch.,  
Rochester, Minn.  
PEGG, Anthony E.: Dept. Physiol., Penn State Univ., Hershey, Pa.  
PENPARGKUL, Somsong: Montefiore Hosp. & Med. Ctr., Bronx, N. Y.  
PERKS, Anthony M.: Dept. Zool., Univ. British Columbia, Vancouver  
POSNER, Philip: Dept. Physiol., Univ. of Florida, Gainesville  
RAMSAY, David J.: Dept. Physiol., Univ. of California, San Francisco  
REHDER, Kai: Dept. Anesthesiology, Mayo Clinic, Rochester, Minn.  
ROBERTSHAW, David: Dept. Anat. & Physiol., Indiana Univ.  
ROPER, Stephen D.: Dept. Anat., Univ. of Colorado Med. Ctr., Denver  
ROSENSTEIN, Robert: VA Ctr., White River Junction, Vt.  
ROTMAN, Harold H.: Dept. Int. Med., Univ. of Michigan Med. Ctr.  
SAIDUDDIN, Syed: Vet. Physiol. & Pharmacol., Ohio State Univ.  
SANT'AMBROGIO, Giuseppe: Dept. Physiol. & Biophys., Univ. of  
Texas, Galveston  
SHERMAN, James H.: Physiol. Dept., Univ. of Michigan, Ann Arbor  
SMITH, M. Susan: Dept. Physiol., Univ. of Massachusetts, Worcester  
SPATH, James A., Jr.: Dept. Physiol., Jefferson Med. Coll., Thomas  
Jefferson Univ., Philadelphia  
STOKES, Bradford T.: Dept. Physiol., Ohio State Univ., Columbus  
STOREY, Bayard T.: Dept. Physiol., Univ. of Pennsylvania

SUGA, Hiroyuki: Dept. Biomed. Eng., Johns Hopkins Univ., Baltimore  
 SZABO, Andrew J.: Dept. Med., New York Med. Coll., New York  
 TEMPEL, George E.: Dept. Biol., Univ. of Missouri-Kansas City  
 TERJUNG, Ronald L.: Dept. Physiol. & Biophys., Univ. of Illinois  
 TRAYSTMAN, Richard J.: Dept. Environ. Med., Johns Hopkins Univ.  
 TRIPPODO, Nick C.: Dept. Physiol. & Biophys., Univ. of Mississippi  
 VALCANA, Theony: Dept. Physiol., Univ. of California - Berkeley  
 VAN HORN, Diane L.: Dept. Physiol., Med. Coll. of Wis., Milwaukee  
 VAN WYNSBERGHE, Donna M.: Dept. Zool., Univ. of Wis., Milwaukee  
 VILCHEZ-MARTINEZ, Jesus A.: VA Hosp., New Orleans, La  
 WARTOFSKY, Leonard: Walter Reed Army Inst. Res., Washington, D. C.  
 WELLING, Larry W.: Clinical Investigator, Kansas City VA Hosp.  
 WILSON, Barry W.: Dept. Avian Sci., Univ. of California, Davis  
 WITORSCH, Raphael J.: Dept. Physiol., Med. Coll. of Virginia  
 YEAGER, Henry, Jr.: Dept. Med., Georgetown Univ., Washington, D. C.  
 YARGER, William E.: VA Hospital, Durham, N. C.  
 YUNICE, Andy A.: Renal Div., VA Hosp., Oklahoma City, Okla.

#### ASSOCIATE MEMBERS

BENUMOF, Jonathan L.: Anesthesia Res. Lab., Univ. Calif. San Diego  
 BERECEK, Kathleen H.: Dept. Physiol., Univ. of Michigan, Ann Arbor  
 BRUGGEMAN, Teresa M.: Dept. Physiol., Univ. of Michigan, Ann Arbor  
 CAFLISCH, Carlton R.: Dept. Physiol., Univ. of New Mexico  
 CHUNG, Raphael S. K.: VA Hosp., Iowa City, Iowa  
 DeFORREST, Jack M.: Dept. Biol., Penn State Univ., University Park  
 DORMER, Kenneth J.: Marine Biomed. Inst., Galveston, Texas  
 EHRENSPECK, Gerhard: Dept. Physiol. & Biophys., Mt. Sinai Sch.  
 Med., New York  
 ELBLE, Rodger J., Jr.: Dept. Physiol., Indiana Univ. Med. Sch.  
 FRANK, Martin: Dept. Physiol., George Washington Univ. Med. Ctr.,  
 Washington, D. C.  
 FREY, Mary Anne: Dept. Physiol., Wright State Univ. Sch. Med.  
 GASPARD, Therese: Dept. Physiol., Med. Coll. of Wis., Milwaukee  
 GRIMM-JORGENSEN, Yvonne: Dept. Anat., Univ. of Connecticut Hlth.  
 Ctr., Farmington  
 GROER, Maureen E.: Assoc. Prof. Nursing, Lewis University  
 GROSS, David R.: Dept. Vet. Physiol. & Pharmacol., Texas A & M  
 Univ., College Station, Texas  
 HILES, Linda G.: Coll. Nursing, Univ. of Illinois Med. Ctr., Chicago  
 HOLLAND, Roger P.: Billings Hospital, Chicago, Ill.  
 JONES, Stephen B.: Dept. Physiol., Loyola Univ., Stritch Sch. Med.,  
 Maywood, Ill.  
 KLABUNDE, Richard E.: Div. Pharmacol., Univ. of Calif., San Diego  
 MANGELSEN, Eric: Dept. Physiol., Univ. of Michigan, Ann Arbor  
 MARKLE, Ronald A.: Penn State Univ., University Park, Pa.  
 MASTERSON, Eileen: Dept. Physiol., Med. Coll. Wis., Milwaukee  
 MATALON, Sady V.: Div. Neonatology, Children's Memorial Hosp.,  
 Chicago, Ill.  
 MAZZONE, Robert W.: Dept. of Med., Univ. California, San Diego  
 MISANKO, Brian S.: Dept. Physiol., Univ. of New Mexico, Albuquerque  
 NEWELL, Jonathan C.: Dept. Physiol., Albany Med. Sch. Albany, N. Y.  
 NOSEK, Thomas M.: Dept. Physiol., Bowman Gray Sch. Med.,  
 Winston-Salem, N. C.

- OSTRANDER, Lee E. : Clin. Res., S. C. Johnson & Son, Inc., Racine  
PETERSON, Darwin W. : Dept. Physiol. & Pharmacol., Bowman  
Gray Sch. Med., Winston-Salem, N. C.  
POLLOCK, Michael L. : Inst. for Aerobics Research, Dallas, Texas  
PTITO, Maurice: Dept. of Psychiatry, Stanford Univ., Stanford, Calif.  
SEIDEL, Charles L. : Dept. of Cell Biophys., Baylor Coll. Med.,  
Houston, Texas  
SHANAHAN, Michael F. : Dept. Physiol., Univ. of Michigan Med. Sch.  
SHORE, Laurence S. : Dept. Physiol., Temple Univ., Philadelphia  
SPURRIER, Wilma A. : Dept. Physiol., Loyola Univ., Maywood, Ill.  
STRAND, James C. : Dept. Physiol. & Biophys., Univ. of Nebraska  
Coll. Med., Omaha  
TALLITSCH, Robert B. : Dept. Biol., Augustana Coll., Rock Island  
VAN NICE, Paul S. : Dept. Physiol., Univ. of New Mexico  
WALLING, Marlin W. : Wadsworth Hosp. Ctr., Los Angeles, Calif.  
WALSTON, Abe II: Duke Medical Ctr., Durham, N. C.  
WATROUS, James J. : Biol. Dept., St. Joseph's Coll., Philadelphia  
WILKERSON, James E. : Inst. Environ. Stress, Univ. of California,  
Santa Barbara  
WONDERGEM, Robert: Dept. Physiol., Med. Coll. of Wisconsin,  
Milwaukee

\*\*\*\*\*

#### SIXTH INTERNATIONAL CONGRESS OF THE TRANSPLANTATION SOCIETY

The Sixth International Congress of the Transplantation Society will be held August 22-28, 1976, at the Waldorf-Astoria Hotel in New York City. More than 2,500 physicians and biomedical scientists are expected to attend. Drs. John M. Converse, Lawrence D. Bell, and Felix T. Rapaport are co-chairmen of the Congress. For further information please write to: Congress Secretariat, Dr. Felix Rapaport, New York University Med. Ctr., 560 First Avenue (room H-438) New York, N. Y. 10016.



## 1975 FISCAL REPORTS

The Bylaws of the Society (Article VII) identify the three principal funds which are used for the fiscal management of the Society's affairs. The behavior of these funds during the year 1975 are summarized below.

### SOCIETY OPERATING FUND

This fund is used for direct services to members through arrangement of meetings, programs, etc.; the expenses and activities of Council and its committees (other than publications); the generation and distribution of educational materials; and the supervision of the business affairs of the Society.

#### INCOME:

Membership Dues	\$139,568	(66%)
Sustaining Associates Contributions	5,375	( 3%)
Reimbursement for Services rendered in connection with Fed. Spring Meeting	49,374	(21%)
Interest	7,698	( 4%)
Other Income (sale of educational and other materials, etc.)	10,723	( 6%)
Total Income	<u>\$213,038</u>	

#### EXPENSES:

Salaries and Benefits	\$43,233	(19%)
Dues to Fed. and other organizations	48,772	(21%)
Office Rental (Paid to Fed.)	7,958	( 3%)
Hotel & Travel for Officers and Committees (other than publications)	11,776	( 4%)
Education Committee and Office	56,922	(25%)
Cost of Member Physiologist Subscr.	25,636	(11%)
Daggs Award	500	-
Bowditch Lecture	500	-
Mail, Telephone, Supplies & Misc.	9,757	( 4%)
Program Committee	3,859	( 2%)
Task Force	1,505	( 1%)
Fall Meeting (Net)	3,557	( 2%)
Business Office Expenses	15,099	( 8%)
Total Expenses	<u>\$229,074</u>	

Excess of Expenses over Income (Deficit)     (\$16,036)

PUBLICATIONS OPERATING FUND

This fund represents the functions of the Society as a publisher of scientific journals.

INCOME:

Subscriptions	\$778,843	(70%)
Sale of Reprints (Net)	84,094	( 8%)
Sale of Back and Single Issues	17,499	( 2%)
Page Charges and Alterations	184,322	(17%)
Advertising (Net)	14,093	( 1%)
Interest and Royalties	34,397	( 2%)
Miscellaneous	583	( - )
Total Income	\$1,113,831	

EXPENSES:

Printing and Engraving	659,018	(58%)
Salaries and Benefits	186,679	(17%)
Mail, Telephone, Supplies, etc.	84,888	( 7%)
Office Rental (Paid to Fed.)	17,551	( 2%)
Section Editor Expenses & Professional Services	76,582	( 6%)
Hotel & Travel Expenses	19,754	( 2%)
Miscellaneous	818	( - )
Business Office Expenses	95,628	( 8%)
Expenses Transferred to Handbooks	(18,000)	( - )
Total Expenses	\$1,122,918	
Net Deficit	(\$9,087)	

PUBLICATIONS CONTINGENCY AND RESERVE FUND

This is a reserve fund which the Society has accumulated over many years. Its existence is dictated by prudent business practice. In case of any severe reversals, etc., the journals can continue to be published for at least one year following such reversals. The Society has very few tangible, salable assets that could be used as collateral for borrowing money. The fund's size should be from one to two times the annual operating costs of the publication operations, including the Handbooks. It is held in long term investments managed by an investment counselor. Its uses are carefully spelled out in Article VII, Section 3 of the Society Bylaws.

Balance Dec. 31, 1974 (market value)	\$870,243
Dividend and Interest paid to APS in 1975	53,892
Balance Dec. 31, 1975 (market value)	\$1,004,227

## TRAVEL GRANT PROGRAM FOR 1977 INTERNATIONAL PHYSIOLOGICAL CONGRESS

The U.S.A. National Committee for the International Union of Physiological Sciences is sponsoring a travel grant program to benefit American scientists who could not attend the 27th International Congress of Physiological Sciences in Paris, July 18-24, 1977, without such assistance. A limited number of grants will be available. Those eligible for awards are qualified scientists who are citizens or permanent residents of the United States. Each applicant will be judged on the merit of his contribution to the Congress in Paris, considering his training, experience, and potential, as well as a reasonable representation of age groups. Grants will ordinarily be limited to the lowest group fare available plus the domestic fare.

Requests for application forms should be addressed to:

U. S. A. National Committee for I. U. P. S.  
Div. of Medical Sciences - Room 359  
National Research Council  
2101 Constitution Avenue, N.W.  
Washington, D. C. 20418

Deadline for receipt of Applications is December 1, 1976.

## SYMPOSIUM ON RADIOACTIVE MICROSPHERE METHOD

A Symposium on the Radioactive Microsphere Method will be held at Janssen Pharmaceutica, Beerse, Belgium, on July 3, 1976. This Symposium is an official pre-symposium to the IXth World Conference on Microcirculation in Antwerp, July 5-9, 1976. For further information contact: Mary Laureyssens, Secretary to the Symposium, Koninklijke laan 17, 2340 Beerse, Belgium.

## RAY G. DAGGS AWARD



The 3rd Daggs Award was presented to Dr. James D. Hardy by Dr. Bodil Schmidt-Nielsen on April 13, 1976.

Dr. Schmidt-Nielsen stated that the Daggs Award is bestowed on a member of the Society specifically for services to the Society as well as the science of Physiology.

Dr. Hardy thanked Dr. Schmidt-Nielsen and the Committee for the Award, saying he would treasure it always.

He said it had been his good fortune to have known Dr. Daggs for many years - in fact before Dr. Daggs became associated with APS, and recalled their relationship during World War II. At that time, Dr. Daggs was head of a laboratory at the Army Field Medical Research Laboratory in Ft. Knox, Kentucky. He praised Dr. Daggs for his work and service both before and after he joined the Society.

Dr. Hardy talked of his present activities and interests especially the ones which keep him in touch with his colleagues.

Dr. Hardy became a member of the Society in 1939. He served on Council from 1958 to 1960 and again from 1962 to 1968. He was a member of the Membership Advisory Committee in 1960 and Chairman of that Committee in 1961. He served on the AJP and JAP Editorial Board from 1960 to 1962. At the same time he was Section Editor of Environmental Physiology and was Chairman of the International Commission on Thermal Physiology from 1970 to 1973.

Dr. Hardy has received many honors, has published some 230 papers and he now has four in press. He is perhaps best known for his work in physiological temperature regulation.

## PARATHYROID GLAND COMPLETES THE HANDBOOK SECTION ON ENDOCRINOLOGY

The volume, Parathyroid Gland, of the Handbook of Physiology contains a series of expositions dealing with hormonal control of calcium metabolism and bone. Each of the authors has been encouraged to present a detailed analysis of his topic in broad scope rather than provide merely a literature review of a circumscribed area. The student should find each contribution, nevertheless, an important introduction to the literature as well as a summary of information on the topic presented.

Subject matter for the volume is presented under two broad categories. The first part of the volume deals with the structure of bone, mineral metabolism, and ionic control of metabolic processes. The remainder of the volume is devoted to hormonal control by vitamin D metabolites, parathyroid hormone, and calcitonin as well as topics related to synthesis, secretion, and mechanism of action of these hormones. Physiologically all of these systems are closely interrelated in the organism and it is hoped that generous cross-referencing as well as interdigitation of subject matter between chapters will give full expression to the interrelationships involved. A short introductory chapter written by the Editor, Gerald D. Aurbach, has been provided to lend a degree of historical perspective as well as a thumbnail outline of the subject matter herein.

Parathyroid Gland contains 488 pages and 233 figures (1 in color) and will sell for \$55.00. Members of the American Physiological Society may purchase copies at a discount if they order directly from the Business Office, 9650 Rockville Pike, Bethesda, Maryland 20014. The price to members is \$44.00.

The volume, available in June, completes the Section on Endocrinology. The Section contains more than 250 chapters, 5000 pages, and 5 million words. It is a milestone in endocrinology and in the Handbook series. The Society is indebted to the Section Editors, Roy O. Greep and Edwin B. Astwood for bringing this work to completion, and to the Volume Editors and about 400 contributors for their time and effort.

## THE JOURNALS - 1976

The Journals of the American Physiological Society are its pride. Ever since the first days of the American Journal of Physiology, it has stood as a towering paradigm of excellence in scientific communication. No library that caters to physiologists, biologists, or physicians can do without it. No account of the present state of scientific reporting can ignore it.

This continued preeminence over the years was no mean accomplishment since physiology continued to change and there was always the unremitting challenge for the publications of the Society to remain responsive to the shifting interests of its membership. Alert publications committees resorted to different strategies to keep apace. Memberships on editorial boards were continually reexamined and modified. New sections appeared in the American Journal of Physiology. When reshuffling and repackaging no longer sufficed, new journals appeared. The Journal of Applied Physiology represented at least one large constituency that the American Journal of Physiology could no longer accommodate; the Journal of Neurophysiology another.

Each generation of publication committees was sensitive to the challenge of matching the journals to the changing times. But, by the 1960's, the problem was formidable. Specialization and fractionation in physiology had reached a new peak. The ranks of the generalist in physiology had grown thinner and thinner. A host of new specialty journals, many headed by members of the American Physiological Society, had appeared as competitors for the journals of the Society. Although the dedicated efforts of the section editors and of reviewers had managed to keep the journals of the Society in the forefront, it seemed clear that a new mechanism had to be established by which the journals of the Society would surge into the lead again, not only in covering the broad perspectives of physiology, but also in coping with the specialized needs of smaller constituencies within the Society.

Taking as a boundary condition the unremitting commitment of the journals to excellence, the question that had to be dealt with was how to satisfy the needs of both the generalist and of the specialist in physiology. After many months of discussion and consultation, a solution emerged. It is now beginning to be implemented. It includes the following elements:

1. The American Journal of Physiology and the Journal of Applied Physiology will continue to exist and to be available as such. This continuing arrangement will satisfy both the generalist in physiology and the librarian who will be able to preserve unbroken series of these two distinguished journals.
2. The Journal of Applied Physiology, under its own editorial board, will restrict itself to papers in respiration, exercise, and environmental physiology.

3. The American Journal of Physiology will include five separate journals, each under its own editorial board and each with well defined subject matter. Each of these components will be available separately. This arrangement will satisfy the specialist who is interested in having on hand outstanding papers in his own particular field of interest.

In practice, each editorial board will be encouraged to exercise editorial individuality and ingenuity. The review process will retain its essential features but editors will be given license to develop mechanisms for review that will expedite the handling of papers without sacrificing quality. The Publications Committee will retain its prerogatives in coordinating the overall activities of the journals and in assuring both quality and responsiveness to the needs of the Society.

In the process of restructuring the journals, two new journals have emerged: Cell (and Membrane) Physiology and Integrative and Regulatory (as well as Comparative) Physiology. These are new directions that need coverage in our journals. Together with the Journal of Neurophysiology, the total sweep of the journals is now exceedingly broad. When viewed in conjunction with Physiological Reviews and the Handbooks of Physiology, the publications of the Society now provide the broadest coverage of physiology in the world.

The individual subscriber may well wonder about how these changes will affect his pocketbook. For those who continue to purchase the American Journal of Physiology and the Journal of Applied Physiology, the price is approximately the same at \$210 per year. If, in addition or instead, the subscriber elects to subscribe to one of the specialty journals that comprise the American Journal of Physiology, the price will prove to be no more than that of the corresponding specialty journal published by others. Indeed, in many instances, it will be far less, particularly to members of the Society who may purchase the journals at half price.

To top it all off, the American Journal of Physiology, the Journal of Applied Physiology and the five component journals of the American Journal of Physiology will all undergo a face-lift. New and attractive covers will express the new individualities of the seven journals. However, the format, the print, and the illustrations, which have been so long in developing to their present level of legibility and attractiveness, will be retained.

These revisions are the products of many years of exploration and deliberation. The new venture seems to provide the exhilarating prospect of retaining the best of the old while opening new doors for cultivation and presentation of the new. As this venture moves ahead, the Publications Committee would welcome the comments and advice of the members of the Society.

Alfred P. Fishman, Chairman  
Paul Horowicz  
F. Eugene Yates

## APS JOURNALS

### STATEMENTS OF SCOPE

Beginning in January 1977 the American Physiological Society will publish the following primary journals:

Journal of Applied Physiology:  
Respiratory, Environmental and Exercise Physiology

Editor: L. E. Farhi

Associate Editors: E. R. Buskirk, A. P. Gagge, Claude Lenfant,  
Joseph Milic-Emili, S. M. Tenney

The Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology accepts articles that contribute significant insights into these three areas of physiology:

- 1) Respiratory physiology, including respiratory mechanics, alveolar gas exchange, pulmonary circulation, blood gas transport, tissue and cellular gas exchange, regulation, and acid-base balance;
- 2) Environmental physiology, including exposure to abnormal environmental conditions (such as heat stress, altitude, radiation, abnormal atmosphere), immediate responses as well as adaptive mechanisms;
- 3) Exercise physiology, including response of the whole body or the specific systems to physical exercise, effects of training, work capacity, and exercise under abnormal environmental conditions.

The information reported may be obtained from human or animal experiments, observations on patients, mathematical analyses, or from work with physical or computer models.

American Journal of Physiology:  
Heart and Circulatory Physiology

Editor: M. N. Levy

Associate Editors: P. C. Johnson, Paul Martin, W. W. Parmley,  
Kiichi Sagawa, Mario Vassalle

The American Journal of Physiology: Heart and Circulatory Physiology will publish original scientific contributions dealing with all aspects of the function and control of the heart, the large arteries and veins, the microcirculation, and blood and lymph. It will include studies that employ a variety of approaches, including biochemical, biophysical, physical-chemical, electrophysiological, anatomical, immunological, and surgical orientations. Studies will be considered that are carried out at all levels of organization, from those dealing with in vitro biochemical studies to observations on intact, unanesthetized man and other animals.



American Journal of Physiology:  
Renal, Fluid and Electrolyte Physiology

Editor: T. E. Andreoli

Associate Editors: J. J. Grantham, F. S. Wright

The American Journal of Physiology: Renal, Fluid and Electrolyte Physiology will publish original manuscripts that deal with renal or body-fluid and electrolyte physiology. Authors are encouraged to submit manuscripts based not only on work involving renal or body-fluid and electrolyte physiology in a particular sense, but also those on broader aspects of excretion and secretion, such as theoretical or experimental papers on transport events in other epithelia, synthetic membrane systems, and reconstituted membrane systems. Manuscripts on the pathophysiology of diseases of the kidney and of fluid and electrolyte homeostasis are welcome.

American Journal of Physiology:  
Endocrinology, Metabolism and Gastrointestinal Physiology

Editor: Rachmiel Levine

Associate Editors: R. M. Bergman, L. R. Johnson, Daniel Porte, Jr., David Rodbard, George Sachs

This journal will publish results of original studies as well as relevant discussions of important issues in the broad fields of endocrinology, metabolism and gastrointestinal physiology. Investigations covering the entire spectrum from molecular biology and biochemistry to animal experimentation, clinical investigation, and mathematical or theoretical studies will be included. Emphasis will be placed on physiological processes at the organ or system level. Investigations of the physiology of gastrointestinal hormones, insulin, glucagon, and the regulation of intermediary metabolism will be welcome, as well as studies dealing with the actions and functions of the anterior and posterior pituitary, thyroid, parathyroid, and adrenal glands and the ovary and the testis. All aspects of metabolism will be considered in addition to the traditional areas of the transformation of foodstuffs. In the broad field of gastrointestinal function, in addition to work on hormones, the journal will encourage the submission of manuscripts on motility, electrophysiology, absorption, and digestion in vivo and in vitro.

It is hoped that this journal will thus provide a broad overview of pertinent physiological facts and theories, as well as functional deviations produced by disease.

American Journal of Physiology:  
Cell Physiology

Editor: Paul Horowicz

Associate Editors: P. J. DeWeer, H. A. Fozzard, F. J. Julian, C. F. Stevens, J. S. Willis, Saul Winegrad

The Cell Physiology journal of the American Journal of Physiology welcomes submission of manuscripts dealing with original studies of biological, chemical, and physical processes, as well as those concerned with physiological regulation and adaptation at the cellular or subcellular level. Manuscripts may report on results of a structural, biochemical, biophysical, comparative or theoretical nature, or some combination of these.

Areas in which reports are welcome include permeability, excitability, receptor mechanisms, muscle and nonmuscle motility, excitation-contraction coupling, membrane and transcellular transport, synaptic transmission, intercellular communication, cellular energetics, hormone action, and developmental studies on these processes. This list is not complete, but merely indicates some current research topics that are appropriate for this journal.

American Journal of Physiology:  
Regulatory, Integrative and Comparative Physiology

Editor: F. E. Yates

Associate Editors: F. P. Conte, D. S. Gann, B. M. Schmidt-Nielsen

This new journal invites papers on broad and unifying themes of physiological science focusing attention on relationships among components of physiological systems, on interactions among different levels within these systems, and on comparative physiology with particular reference to the evolution of physiological functions. These general themes are: 1) multi-system integration at a given level of organization; 2) hierarchical integration across levels of organization; 3) stability of physiological processes and systems (homeostasis, homeokinesis); 4) comparative aspects of the evolution of physiological functions; 5) systems analysis, signal analysis, computer simulations, mathematical models and information flow, applied to physiological systems.

Manuscripts that emphasize problems of communication and control are especially welcome, whether the problems lie within animals, between individuals, or between the individual and the environment. Investigations appropriate for this journal include experimental or mathematical approaches to physiological systems analysis. Some specific examples of topics suitable for Regulatory, Integrative and Comparative Physiology include: thermoregulation, biological rhythms, (chronobiology), regulation of body weight (water and energy stores), shock and responses to trauma, adaptation to special environments (such as altered gravity), comparative and relevant biochemistry (e.g., osmoregulation), regulatory aspects of behavior (sleep, ingestion of food or water, reproduction, hormonal release as a consequence of behavior, hormones or metabolites as causative factors in behavior), and neural control of physiological process.

The editors are interested in attracting the papers of physiologists who are united by a broad interest in regulation, integration, and evolution, as generalized beyond the particular properties of any given system or experimental object.

Journal of Neurophysiology

Chief Editor: E. V. Evarts

The aim of the Journal of Neurophysiology is to provide a channel for the publication of original contributions on the function of the nervous system. Materials submitted may include any phase of the subject amenable to experimental analysis, regardless of experimental methods employed. In earlier times, recordings of electrical activity provided the major advances in our understanding of the function of the nervous system, but today advances in neurophysiology involve the use of more diverse techniques. The increasingly widespread use of anatomical and histochemical techniques in the solution of neurophysiological problems means that a journal of neurophysiology must become correspondingly broader. Furthermore, studies of the nervous system in intact behaving animals and man are becoming increasingly important, and this area is also to be represented in the Journal of Neurophysiology.

After April 1, 1976 manuscripts should be submitted to the appropriate Editor, American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20014.
---------------------------------------------------------------------------------------------------------------------------------------------------------

#### A WORD ABOUT PUBLICATIONS

Preoccupation with sectionalization should not obscure important changes that are occurring in the membership of the Publications Committee. Dr. F. Eugene Yates and Dr. Paul Horowicz are about to become emeritus. They will be succeeded by Dr. Robert M. Berne and Dr. Robert W. Berliner. As the remaining member of the Publications Committee, I should like to express to Drs. Yates and Horowicz the indebtedness of the Society for their continued efforts and contributions to the progress of the journals during the last few years. I should also like to welcome Drs. Berne and Berliner to the Publications Committee and to thank them for their willingness to take on this time-consuming and important responsibility of the American Physiological Society.

Alfred P. Fishman, M.D.  
Chairman, Publications Committee

## CUMULATIVE INDEXES TO AJP AND JAP

Cumulative indexes greatly increase the usefulness of journals. Therefore, the Publications Committee of the American Physiological Society recommended the preparation of subject and author indexes for the American Journal of Physiology (1952 - 1975) and the Journal of Applied Physiology (1948 - 1975). After examining several methods of preparation it was decided to produce the subject indexes by merging the existing volume indexes and to produce the author indexes by combining the tables of contents. A computer and phototypesetter were used to achieve economy and quality printing. The indexes are being distributed to the 1976 subscribers of each journal to achieve maximum distribution and spread the cost equitably; however, they may also be purchased separately.

The author indexes include all of the author's names for a particular article, complete title, volume number, and initial page of the article. Co-authors are listed alphabetically with a see reference to the first author. In the subject indexes main headings are printed in bold face and secondary headings in regular type. See and see also cross-references are included.

The computer program was designed by Science Press. Magnetic tapes were prepared and subsequently run on a photocomposer; pages were produced directly on photographic paper. Printing of the indexes was by offset at Waverly Press, Inc.

Stephen R. Geiger, Publications Manager and Executive Editor, organized the project, which was coordinated by Brenda B. Rauner. Constantine J. Gillespie of the National Institutes of Health Library served as consultant indexer and Lynda L. Richards and Loretta F. Saltzman read proof.

Publications Committee  
Alfred P. Fishman, Chairman  
Paul Horowicz  
F. Eugene Yates

The indexes will be available toward the end of 1976. Those wishing to order separate copies may do so at that time by writing to the Subscription Office, American Physiological Society, 9650 Rockville Pike, Bethesda, Maryland 20014. The price for the indexes for AJP will be \$15.00 and for JAP will be \$8.00.

## SIXTEENTH ANNUAL HANFORD BIOLOGY SYMPOSIUM

The Sixteenth Annual Hanford Biology Symposium will be held in Richland, Washington, September 27-29, 1976. The Symposium is sponsored by the United States Energy Research and Development Administration, Division of Biomedical and Environmental Research and Battelle Memorial Institute, Pacific Northwest Laboratories. The Symposium is entitled "Pulmonary Macrophage and Epithelial Cells." C. L. Sanders and R. P. Schneider are Cochairmen.

The Symposium will cover the biology of pulmonary macrophages, the macrophage and inhaled particles, the biology of pulmonary epithelium, isolation and culture of pulmonary cells, and pathophysiology and structure.

Abstracts, not to exceed 250 words, must be received by June 7, 1976. Each author should provide five copies of his abstract. Language of the Symposium is English. All papers accepted will be published in the ERDA Symposium Series.

Further information can be obtained from: Mrs. Judith A. Rising, Symposium Secretary, Biology Department, Battelle-Northwest, Richland, WA 99352. Telephone Number - (509) 942-3251

## 1976 CONFERENCE ON THE NEUROHYPOPHYSIS

The 1976 Conference on the Neurohypophysis, sponsored by the International Society of Neuroendocrinology, will be held November 13-19, 1976, at the Royal Biscayne Beach Hotel, Key Biscayne, Florida. This will be approximately 20 years since the last International Conference on the Neurohypophysis. There will be between 18 and 20 invited papers with discussion from the floor. Registration will be limited to the first 150 applicants. A registration fee of \$100 will include the cost of the published proceedings. For additional information, contact the Institute for Continuing Education; P.O. Box 11083; The Malvern Building; 2405 Westwood Avenue; Richmond, Virginia 23230.

## APS FALL MEETING - PHILADELPHIA

The 27th Annual Fall Meeting of the American Physiological Society will be held in Philadelphia, Pennsylvania on August 15-20, 1976. It is being sponsored jointly with the Biomedical Engineering Society, and the Division of Comparative Physiology and Biochemistry of the American Society of Zoologists.

All preregistration material was sent during the first two weeks in April. If by this time you have not received your preregistration information packet, please contact the Local Committee at the following address and a packet will be sent immediately.

APS Local Committee  
A201 Richards Building G-4  
University of Pennsylvania  
Philadelphia, PA 19174

This summer, Philadelphia will be the hub of Bicentennial activity. Because of the expected influx of visitors, the Local Committee strongly urges you to plan ahead and promptly return your preregistration material for housing and special events of interest. We can guarantee adequate accommodations only if you preregister by July 19.

The host institutions are Hahnemann Medical College and Hospital, Jefferson Medical College of Thomas Jefferson University, Medical College of Pennsylvania, Temple University School of Medicine, and University of Pennsylvania School of Medicine. All scientific sessions will be held on the campus of the University of Pennsylvania. The traditional scientific sessions with ten minute presentations will begin Tuesday, August 17, and end at noon, Friday, August 20.

The Fall Meeting includes a joint symposium "Water Relations in Membrane Transport in Plants and Animals," sponsored by the Biosciences Information Service of Biological Abstracts (BIOSIS) as part of their 50th anniversary commemoration. Participating societies joining APS in this joint symposium are the American Society of Plant Physiologists and the Division of Comparative Physiology and Biochemistry of the American Society of Zoologists. Organizers of the symposium are Drs. Thomas K. Hodges, Arthur M. Jungreis, Arnost Kleinzeller, Chairman, and S. G. Schultz.

Four other symposia being held as part of the Fall Meeting are:

"Central Neural Mechanisms of Respiration" organized by Drs. Evangelos T. Angelakos, Ronald F. Coburn, Robert E. Forster, and Madhu Kalia, Chairperson. (This symposium has been approved for eight credit hours Category One by the American Medical Association.)

"Tonic and Respiratory Interaction in Aquatic Animals" organized by Dr. James N. Cameron.

"Current Status of Our Knowledge of Neural Mechanisms Mediating Visual Behavior" organized by Dr. James Sprague for the Society for Neuroscience.

"Thrombosis" organized by Dr. Sol Sherry.

The Neurophysiology Refresher Course has been organized by Dr. Donald R. Humphrey. It will deal with "Principles of Organization in Somatosensory Systems."

Three independent, satellite, symposia have been scheduled for August 12, 13, and 14, one at the University of Pennsylvania campus, and two at the campus of Harcum Junior College in Bryn Mawr, Pennsylvania.

Attendees at the APS Fall Meeting are invited to also attend the American Philosophical Society's Jayne Lectures Series to be presented from 12:00 to 1:00 PM on Tuesday, Wednesday, and Thursday in the Zellerbach Auditorium on the University of Pennsylvania campus. The lecture series "Regulation of Amino Acid Metabolism" will be given by Sir Hans Adolf Krebs and will be open to all Fall Meeting registrants free of charge.

As of press time, this is the general schedule of sessions for the Fall Meeting:

Monday, August 16. Refresher Course - "Principles of Organization in Somatosensory Systems"

Tuesday, August 17.

9:00-11:45 BIOSIS Sponsored Symposium - "Water and Solute Transports in Plants"

9:00-11:45 Neuroscience Symposium - "Current Status of Our Knowledge of Neural Mechanisms Mediating Various Classes of Behavior"

9:00-11:45 Scientific Sessions

1:30-4:30 BIOSIS Sponsored Symposium - "Water and Solute Transport in Cells of Invertebrates"

1:30-4:30 Symposium - "Central Neural Mechanisms of Respiration, Part I"

1:30-4:30 Scientific Sessions

Wednesday, August 18

9:00-11:45 BIOSIS Sponsored Symposium - "Epithelial Transport of Solutes and Water"

Wednesday, August 18 (cont.)

- |            |                                                                 |
|------------|-----------------------------------------------------------------|
| 9:00-11:45 | Symposium - "Central Neural Mechanisms of Respiration, Part II" |
| 9:00-11:45 | Scientific Sessions                                             |
| 1:30-4:30  | Visit host school laboratories                                  |

Thursday, August 19

- |            |                                                                                                   |
|------------|---------------------------------------------------------------------------------------------------|
| 9:00-11:45 | BIOSIS Sponsored Symposium - "General Session on Solute and Water Transport in Cells and Tissues" |
| 9:00-11:45 | Symposium - "Thrombosis I"                                                                        |
| 9:00-11:45 | Scientific Sessions                                                                               |
| 1:30-4:30  | Symposium - "Thrombosis II"                                                                       |
| 1:30-4:30  | Symposium - "Ionic and Respiratory Interaction in Aquatic Animals I"                              |
| 1:30-4:30  | Scientific Sessions                                                                               |

Friday, August 20

- |            |                                                                       |
|------------|-----------------------------------------------------------------------|
| 9:00-11:45 | Symposium - "Ionic and Respiratory Interaction in Aquatic Animals II" |
| 9:00-11:45 | Scientific Sessions                                                   |

Independent Satellite SymposiaAugust 12-13

"Fetal Blood Flow and Oxygen Delivery" presented at Harcum Junior College, Bryn Mawr, Pennsylvania, organized by Dr. Lawrence Longo.

August 13-14

"Nerves and the Gut" presented at Harcum Junior College, Bryn Mawr, Pennsylvania, organized by Dr. Frank Brooks.

August 13-14

"Tissue Hypoxia and Ischemia" presented at the University of Pennsylvania campus, organized by Drs. R. F. Coburn, S. Lahiri, M. Reivich, and B. Chance.



## BIOSIS SPONSORED JOINT SYMPOSIUM APS FALL MEETING

The subject of the joint symposium will be "Water Relations in Membrane Transport in Plants and Animals."

Participating Organizations: American Society of Plant Physiologists, Division of Comparative Physiology and Biochemistry of the American Society of Zoologists, and the American Physiological Society.

### AGENDA

SESSION I: Water and solute transport in plant cells (August 17, 1976). Organizer and Chairman - Dr. Thomas Hodges

Ion transport and osmotic regulation in algae.  
Dr. John Gutknecht, Duke University

Transcellular ion movements and growth localization in  
Furoid eggs and other plant cells.  
Drs. K. Robinson and L. Jaffee, Purdue University

Auxin effect on turgor and growth in coleoptiles.  
Dr. Paul Green, Stanford University

The osmotic motor of stomatal movements.  
Dr. Klaus Raschke, Michigan State University

Ion and water fluxes in Chloroplasts.  
Dr. Richard Dilley, Purdue University

Ion transport and energy interconversions in the plasma  
membrane of Neurospora.  
Dr. Clifford Slayman, Yale University

SESSION II: Water and solute transport in cells of invertebrates (August 17, 1976). Organizer and Chairman - Dr. Arthur Jungreis

Solute and water movement in the roundworm Ascaris (Nematoda).  
Dr. Clavin C. Beames, Oklahoma State University

Solute and water movement in molluscs with an emphasis on  
bivalves.  
Dr. Thomas H. Dietz, Louisiana State University

Aspects of fluid movement in the crayfish antennal gland.  
Dr. Jay A. Riegel, University of London

Water, ion and nonelectrolyte movements across the intestine  
of fresh and marine Malacostraca (Crustacea).  
Dr. Gregory A. Ahearn, University of Hawaii

## Session II (cont.)

Molecular mechanisms in the branchiopod larval salt gland (Crustacea).

Dr. Frank Conte, Oregon State University

Biophysical parameters of alkali metal transport across silkworm midgut (Insecta).

Dr. William R. Harvey, Temple University

**SESSION III: Epithelial transport of solutes and water (August 18, 1976).** Organizer and Chairman - Dr. Stanley G. Schultz

Isotonic salt and water absorption in the mammalian proximal straight tubule: Evidence for isotonicity of intracellular spaces.

Dr. Thomas Andreoli, University of Alabama

Passive water flows across epithelial membrane.

Dr. Ernest Wright, University of California

The role of hydrostatic and colloid-osmotic pressure on the paracellular pathway, and on solute and water adsorption.

Dr. Emile Boulpaep, Yale University

Morphological correlates associated with water movement across epithelia.

Dr. John Tormey, University of California

Ionic activities and solute transfer in epithelial cells of the small intestine.

Dr. William Armstrong, Indiana University

The sodium transport pool of epithelial tissue.

Dr. Mortimer Civan, University of Pennsylvania

**SESSION IV: General Session (August 19, 1976).** Organizer and Chairman - Dr. Arnost Kleinzeller

Non-equilibrium thermodynamics of water movement.

Dr. R. Spangler, Buffalo University

Energy coupling in ion and water fluxes across plant membranes.

Dr. J. Hanson, University of Illinois

Problems of water movement in insects.

Dr. J. Phillips, Vancouver University

Cell volume control.

Dr. F. Kregenow, NIH

Hormonal control of salt and water transport by epithelia.

Dr. S. H. P. Maddrell, Cambridge University

Hunger or Thirst? The plant's dilemma.

Dr. K. Raschke, Michigan State University

## AUDIOVISUAL EDUCATIONAL UNITS IN PHYSIOLOGY

Physiology topics which you would like to see developed into audio-visual self-instructional units for your use in teaching are requested. The Audiovisual Production Subcommittee of the APS Education Committee would like to know what areas of physiology you would like to have available in the format of color slides and tape cassettes for use in teaching medical students, undergraduate students, and graduate students. So far, slide tape series on general renal function, cardiac mechanics, acid base balance, renal control of ion homeostasis, and electrophysiology of the heart have been produced or are being produced. Your suggestions for future series will be of great value as we plan for the next few years.

We will also welcome your suggestions for the names of individuals who have an interest in specific areas and might like to contribute to the development of future series of slide tapes. The time required to develop a slide tape unit is several months which includes a three day workshop for authors and several weeks afterward for the development of the script. A professional artist works with the authors to produce the drawings and slides. All units are student tested for effectiveness in teaching and peer-reviewed for scientific content and presentation before they are released for sale by APS. Please send your suggestions for topics and authors to Dr. Robert B. Gunn, APS Education Committee, Pharmacological and Physiological Sciences, University of Chicago, 947 E. 58th Street, Chicago, Illinois 60637 or to APS Headquarters.

## THE PHYSIOLOGY TEACHER

The Publications Committee, in response to the requests of the Editor and the Education Committee, is considering a proposed format change for The Physiologist and The Physiology Teacher. This proposal was outlined in The Physiologist in February. To present and facilitate discussion of this proposal, The Physiology Teacher was enclosed with the February issue of The Physiologist and is again included with this issue. Of the 208 members who returned the February Survey, 92% favored the proposed format of 8-1/2 x 11 for The Physiologist in combination with The Physiology Teacher. We were particularly gratified to receive over 50 cards from prospective contributors to The Physiology Teacher. To the ten members who noted the misspelling on the survey cards, thanks, it won't happen again.

## LABORATORY EXPERIMENTS

Listed below are the titles of experiments which have appeared in The Physiology Teacher. Back issues containing these experiments are available. Also available is a booklet on Computer Assisted Education, a published Teaching Session of APS presented at the April 1973 FASEB Meeting. Single copies of the booklet or back issues of The Physiology Teacher can be obtained from the Education Office, APS Headquarters, for a charge of \$1.00 to cover postage and handling expenses.

Control of Respiration Studied by Voluntary Apnea (Breath Holding). Vol. 1, (1). B. A. Curtis

Individualities of Smooth Muscle Function and Control: A Comparison of Aortic Muscle and Longitudinal Muscle of the Small Intestine. Vol.1 (2). David F. Bohr

Action of Antidiuretic Hormone and its Intermediate Cyclic AMP, on Water Reabsorption from the Toad Bladder. Vol. 1 (3). G. A. Rinard, J. D. Neill

Autorhythmetry- Procedures for Physiologic Self-Measurements and their Analysis.Vol.1 (4). Franz Halberg, Eugene A. Johnson, Walter Nelson, Walter Runge, Robert Sothorn

A Classroom Method for Determination of Oxygen Dissociation Curves of Hemocyanin.Vol.1(4). John S. Poluhowich, Peter Krinsky

Studies of Neuromuscular Excitation. Vol. 1(5). Charles Siedel, Paul C. Churchill

Physiological Pharmacology Laboratory Exercise: Effects of Chlorpromazine and Ethanol Combination in Mice. Vol. 1(6). Harvey J. Berger

Techniques for Making Simple Macro Electrodes for Recording Electrical Activity in Nerve or Muscle Cells. Vol. 1(6). Dorothy H. Paul, Nancy S. Milburn

Negative Feedback Control in the Blowfly - A Laboratory Exercise. Vol. 1(7). Margaret Nelson

Demonstration of Various Habitats for Investigating Murine Behavior Patterns. Vol. 1(7). Daniel L. Ely, James P. Henry

Measurement of Insect Heartbeat by Impedance Conversion. Vol. 2(1). T. A. Miller

Human Control System Experiment for Student Laboratory. Vol. 2(2). Robert D. Wurster, Robert D. McCook

A Respiration Experiment for a Self Pacing Laboratory: Work and O<sub>2</sub> Consumption. Vol. 2(3). Lloyd Barr

Appropriate Laboratory Animal Classroom Demonstrations on the Effects of Drugs. Vol. 2 (3). Earl Uslin

Contractile Characteristics of Fast and Slow Skeletal Muscles. Vol. 2(4). M. R. Fedde

Hormonal Deficiencies Determined by Urine Analyses. Vol. 3 (1). John Bullock, John W. Bauman, Jr.

Student Laboratory Exercise in Temperature Regulation. Vol. 3 (2). Albert B. Craig, Jr., William M. Abraham

Leg Lift in the Cockroach. Vol. 3 (3). Kathryn L. Lovell, E. M. Eisenstein

Continuous Remote Body Temperature Recording. Vol. 3 (4). Kirt J. Vener, Robert J. Kinders

Computerized Model of Kidney Regulation by Renin-Angiotensin. Vol. 3 (4). C. Leon Harris, Meyer Katzper

Permeability of the Erythrocyte Membrane. Vol. 4 (2). Harold G. Hempling

A Do-It-Your-Self Heart. Vol. 4 (2). Lewis Greenwald

Continuous Remote Body Temperature Recording II. Vol. 4 (2). Kirt J. Vener, Robert Murphy, Ava Adams

Radio-Telemetry Temperature Studies of Homoiotherms and Poikilotherms. Vol. 4 (3). Dennis L. Stockdale.

A New Gastric Function Laboratory for Physiology Students. Vol. 4 (4). Thomas J. Sernka, Anne F. Jackson

Simulated Head Injury: A Model for Integrated Teaching. Vol. 4 (4). David D. Michie, Clarence P. Cain

A Comparative Study of Diving Physiology. Vol. 4 (4). D. S. Bruce, D. F. Speck, J. A. Magary, J. S. Westerhoven

A Simple Laboratory Study of Renal Tubular Secretion. Vol. 5 (1). John B. Pritchard, Darrell D. Wheeler

Anesthetization of Snakes. Vol. 5 (1). M. E. Valentinuzzi

Methods for Insect Anesthetization and Immobilization. Vol. 5 (1). C. Collins

## PRESIDENT'S REPORT

### Election

Two years ago, our Bylaws were changed with respect to the procedure for election of officers. The nomination as well as the election now take place by mail ballot prior to April 1st of each year. The result of the election this year was that Dr. W. F. Ganong was elected President-Elect and Doctors W. C. Randall and F. J. Haddy were elected Councillors. Sixteen hundred votes were cast. Out of these, 1420 votes were valid. This is four times as many as were cast for President at the Business Meetings in the past. Ten times as many votes were cast for Councillors as in the past. Councillors were usually elected at the second Business Meeting, by the time the attendance had declined.

A question was raised in letters addressed to Dr. Reynolds concerning the difficulties in dealing with a ballot with ten nominees. According to Article IV, Section 4 of our Bylaws, the ten candidates that receive the highest number of nominating votes will appear on the appropriate ballots for President-Elect or Council. (The members present at the Business Meeting were asked by a show of hands to indicate their preference for or against having as many as ten nominees on the ballot. An overwhelming majority indicated their preference for having ten nominees on the ballot.)

### Finances

The financial report by Dr. E. B. Brown, Chairman of the Finance Committee, shows that the Society is in good fiscal health. The Publications Contingency Reserve Fund again has a value over one million dollars, after having dipped below the one million dollar mark as the Stock Market slipped. At the end of February, the Publications Contingency Reserve Fund had a value of \$1,079,000.00. It is the intention of Council that this fund shall be large enough to cover at least one year's operation cost of the Society. At the present time we are somewhat short of this goal. At the last Finance Committee Meeting, it was decided to invest \$300,000.00 of the operating fund. This new fund is called the Operations Reserve Fund. While authority for any withdrawal from the Publications Contingency Reserve Fund requires five signatures, the Operations Reserve Fund requires only the signature of the Business Manager and Executive Secretary. Consequently, it can be used in an emergency. It is, however, the intention to keep this new fund intact. The reserve funds are very important to the Society because the income can be used for new ventures; for example, they have been invaluable in funding the handbook series and we are now able to fund the audiovisual aid program of the Education Office. In years when the Society operating funds are in the red, the income is used to cover the deficit.

Now, I come to the more unpleasant news. As all of you know, inflation has caused all of the expenses of the Society to increase. Salaries have increased, printing costs have increased, and we have to foot the bill for the new sectionalization of the journals as well as the production

of the audiovisual tapes. I should add here that your Council firmly believes that these new ventures with time will pay for themselves. However, at this time it is necessary to raise the dues. At the meeting in San Francisco, Council voted to raise the dues to \$45.00 per year for regular members. We were still hoping that we could avoid this raise. The last report by the Finance Committee, however, shows that it will not be possible to balance the budget without the increase in dues.

#### Education Office

At this time, I should like to say some words about our Education Office. As most of you know, the audiovisual aids (illustrated lectures in physiology) were marketed for the first time a year ago. They have been selling very well, but we do not at this time have a complete evaluation by teachers and students of this new teaching aid. Council has initiated a careful evaluation of this program. In the meantime, in order to maintain the forward thrust in the production, Council has voted to support the production of audiovisual aids for three years. During this period, a very careful evaluation of the program will be conducted. In addition to the evaluation by the institutions using the material, an Education Materials Review Board has been established as outlined in the February issue of The Physiologist. This review board will also evaluate the quality of the slide tapes. Also an in-house review by students will be conducted. The results of these reviews will be reported to Council and to the membership in the future. The Education Committee is now working on production of several new slide tapes, some of which have been shown to Council. It is our feeling that the quality of the slide tapes is steadily improving as the Education Committee gains more experience.

#### Sections and Specialty Groups

The major concern and interest of Council for the last several years has been to encourage specialty groups to become more active within the American Physiological Society. It is our sincere desire to make the Society as attractive and useful for our members as possible. During the past couple of years, we have actively been encouraging specialty groups to assume a more formal structure. Several groups started as task forces and have now become sections. As examples I can mention the Sections on Gastrointestinal Physiology, Clinical Physiology and Neurophysiology. As mentioned in Dr. Goodman's report, there is a tremendous input from these sections to the Program Committee. Symposia are planned by the sections, the sections help find chairmen for sessions of contributed papers, etc. It is Council's desire to make the arrangement flexible and to give the sections as much autonomy as we can without at the same time encouraging them to splinter off and form societies by themselves. Council plans a change in the structure of the Program Committee to facilitate the communication between sections and the Program Committee and to make it possible for the Program Committee and Council to coordinate the specialty programs.

One important development which has occurred is that the Section on Gastrointestinal Physiology is in the process of formalizing its operational procedures. This is being done in close collaboration with Council to insure that none of these procedures are in conflict with the Bylaws of the Society. One of the suggestions, which I would like to bring to your attention, is that all members of the American Physiological Society who wish to become members of a section can just indicate so and they will automatically be accepted. In addition, members of other societies are encouraged to become "Intersociety" members of the section. The American Physiological Society would encourage these members to become associate members of the Society as I will discuss presently.

Besides the already established sections, we have this year formed one new task force, i.e., the Task Force on Comparative Physiology. It is a joint task force between the American Society of Zoology, Division of Comparative Physiology and Biochemistry, and the American Physiological Society. Dr. Frank Conte is our chairman of the task force. Similar task forces can be formed jointly with other related societies. For example, I am presently in the initial stages of establishing a Task Force in Cellular Physiology. It will probably be a joint task force with the Biophysics Society. In this way and by making our programs more attractive, we hope to bring splinter groups back into the Society rather than losing them. Some members of the Society might feel that we are encouraging splinter groups to form through this procedure. Personally, I do not believe so. By encouraging and helping specialty groups to achieve their goals within the American Physiological Society and at the same time coordinating their efforts through Council and the Program Committee, we feel that maximum benefits can be derived by the specialty groups.

In addition to the regular programs at our spring and fall meetings, we are also encouraging specialty meetings sponsored by the American Physiological Society held at campuses during summer or Christmas vacations. These new types of meetings were discussed in the President's Report, November 1975.

#### Bylaw Changes

At the Business Meeting the membership voted to adopt the new Bylaw on corresponding members as presented in the February issue of The Physiologist.

Council is now actively engaged in a proposal for a new Bylaw change for associate members and student members. As explained in Dr. Bishop's report, the intention is to widen the scope of the associate membership to make it possible for scientists in related fields to become associate members of our society. One of the benefits would be that we can encourage affiliated members of specialty groups to become associate members of the American Physiological Society, with the right to present papers at the fall meeting.



Council has voted to present the proposed Bylaw changes to the membership (in *The Physiologist*) for further comments.

#### Congressional Fellow

One additional point is of interest to the discussion at this time. At the FASEB Board Meeting, a report was given by Dr. Silverstein who has been the FASEB Congressional Fellow during the past eight months. A Congressional Fellow is a biologist appointed by FASEB to spend a year working for Congress, while his salary is paid by FASEB. After an initiation period of three weeks, the Fellow chooses with whom he wishes to work. Dr. Silverstein chose to work on Senator Edward Kennedy's Subcommittee on Health. Dr. Silverstein's report to the FASEB Board was vivid, informative and interesting. In this report I only wish to tell you one thing which concerns us all. Dr. Silverstein reported that members of Congress have a rather peculiar view of science and scientists. They feel that science is good, just like motherhood, but scientists are usually not well liked, the reason being that scientists almost always come to Congress and ask for money or help, but never seem to offer their help. Although this picture is not completely true, it did strike home with most of us who listened to the report. Dr. Silverstein felt that if physiologists individually would go to their own state representatives and senators and ask "What can I do to help? I represent this expertise and I can get expertise from others in their fields. If you wish help, I shall be glad to furnish it," then better and more meaningful communication with the legislative branch could be achieved.

In ending this report, I should like to make it clear to all the members of the Society that your Council wishes to serve you in the best possible way. Therefore, your opinion is highly valued. We shall continue to explore all possible avenues through which the American Physiological Society can best serve its members.

Bodil M. Schmidt-Nielsen

NOTICE TO SPONSORS AND APPLICANTS  
FOR  
MEMBERSHIP IN APS

A new Application Form for Regular Membership was approved by the Council at its April 1976 meeting. After June 1st, 1976 only applications submitted on the new form will be considered for membership. The new form and instructions for preparing the application may be obtained by writing:

Executive Secretary  
American Physiological Society  
9650 Rockville Pike  
Bethesda, MD 20014

Completed applications may be submitted anytime throughout the year. Those received between February 1st and July 1st are considered for nomination by Council at the Fall Meeting. Those received between July 1st and February 1st are considered for nomination at the Spring Meeting.

Bylaws of the Society for regular membership:

Article 1, Section 2 - Members. Any person who has conducted and published meritorious original research in physiology, who is presently engaged in physiological work, and who is a resident of North America shall be eligible for proposal for regular membership in the Society.

Current Guidelines for Applicants and Sponsors

Applicant's Qualifications

The Membership Advisory Committee uses the following six categories in evaluating an application:

1. Educational History. Academic degree and postdoctoral training are evaluated and assessed with regard to how closely the applicant's training has been tied to physiology.
2. Occupational History. Particular emphasis is given to those applicants who have a full time position in a department of physiology. Relatively high ratings are given to people with research positions in clinical departments and to people functioning as independent investigators in commercial or government laboratories.
3. Contributions to the Physiological Literature. This category is of major importance. The applicant's bibliography is evaluated on the basis of publications in major, refereed journals which are concerned with problems judged to be primarily physiological in nature. Emphasis is given to papers published as the result of independent research. Special note is taken of publications on which the applicant is sole author or first author.

4. Interest in and Commitment to Teaching Physiology. This evaluation is based on: 1) the fraction of the applicant's time devoted to teaching, 2) publications related to his activities as a teacher including production of educational materials, and 3) special awards or other recognition he has received for outstanding teaching effectiveness.
5. Interest in the Society. Evaluation of this category is based on: 1) the meetings at which he reads his papers, and 2) the Society meetings he attends.
6. Special Considerations. This category permits the Membership Advisory Committee to acknowledge unique accomplishments of an applicant. These might be excellence in a specific area, or unusual contributions to Physiology resulting from talents, interests or a background substantially different from the average.

SPONSORS: Primary responsibility for membership rests with the two sponsors who must be regular members of the Society. Sponsors should discuss the appropriateness of regular membership in this Society with prospective applicants. A common reason for rejection is premature application.

Each sponsor should write an independent confidential letter about the candidate using the six categories listed above to evaluate the candidate.

Beverly Bishop, Chairman

## REPORT TO COUNCIL: ACTIVITIES OF THE EDUCATION COMMITTEE OF THE AMERICAN PHYSIOLOGICAL SOCIETY

MARCH 1976

The following is a summary of the current activities and plans of the Education Committee of the American Physiological Society:

1. The Audiovisual Project: In 1972, the Society embarked upon a major effort to evaluate existing audiovisual materials in the field of physiology and to prepare materials in areas where deficiencies existed. The evaluation of existing materials was carried out in two stages, the first financed by a contract from the National Medical Audiovisual Center (NMAC) and the second by a grant from the National Fund for Medical Education. Many members of the Society participated in these reviews, as members of expert panels. The results of these reviews have been published as supplements to *The Physiologist* (second appearing in November, 1975) and have proven to be of considerable value to teachers of physiology.

With contract funds from NMAC, the Society also began the production of slide-tape presentations in various areas of physiology. The first evaluation effort had revealed a paucity of material appropriate for the instruction of medical, paramedical and graduate students in the areas of renal and cardiovascular physiology. Therefore, the Steering Committee charged with the management of the project chose those two areas for the first productions under the NMAC contract. After two years of hard work by members of the Society, 14 slide-tape presentations were completed. Eight of these were in the area of renal physiology and the remainder in the area of cardiac physiology. It then became clear that there would be an interminable delay, before these materials were marketed by the federal government. Consequently, the Society requested and was finally granted permission to market these materials. An arrangement was made with the AV/MD Division of Steven K. Herlitz, Incorporated to produce and market these materials. They have been available for purchase since the fall of 1975. While the foregoing events were in progress, a second series of slide-tape presentations were begun under another contract from NMAC. This series consisted of 4 slide-tapes in the area of acid-base physiology. These materials are now in the final stages of evaluation and revision. When the contract was given for the acid-base series of slide-tapes, NMAC indicated that no further contracts would be given to the Society for the preparation of such materials. It is their policy to give financial support and guidance to professional groups to launch audio-visual production activities. Once this has been accomplished, the government expects the production effort to be self-propagating. It was at this juncture that Council agreed, at their spring meeting in 1975, to provide financial support from Society resources for the audiovisual production program for a period sufficient to determine if the program is indeed of value and can be financially self-sufficient. As a consequence of Council's action, elaborate plans were made by the Education Committee to provide an "in-house" mechanism for the preparation and quality control of slide-tape materials. A new series of slide-tapes on renal physiology

and cardiac electrophysiology were then undertaken. This section of the report will consider the status of the acid-base series of slide-tapes, the sales of the renal and cardiac slide-tapes, and progress on the new renal and cardiac electrophysiology slide-tapes.

a) **Acid-Base Slide-Tapes:** These materials, which have been prepared under contract from NMAC, include:

Buffer Chemistry/Physiological Applications - E. Schneider

Role of Respiration in Hydrogen Ion Regulation - A. Otis

Renal Regulation of Hydrogen Ion Metabolism - J. Cohen

Disturbances of Hydrogen Ion Regulation - R. Tanner

They resulted from a year-long effort by the authors (listed above), APS education staff and NMAC staff. After the authors were identified by the Education Committee, joint workshops were held with the authors, APS and NMAC staff to identify subject matter, areas of each author's concern, and the proper approach to the preparation of an audio-visual presentation (selection of objectives, pre- and post-test questions, script preparation, etc.). The authors then prepared drafts of scripts that were interchanged among authors and staff for reaction and criticism. Storyboard art was then developed by the APS education staff artist working in association with each author. After considerable revision, these materials were submitted to student groups for evaluation at each author's institution and at Temple University. The entire series has also been submitted to four members of the newly-formed Educational Materials Review Board (EMRB) (see below) for criticism and suggestions for revision. These individuals include John B. West, Robert A. Wohlbach, Arthur J. Vander, and Fred W. Zechman. All were highly enthusiastic about the suitability of the materials for the instruction of first-year medical students, and offered detailed suggestions for revisions.

Whether these materials will be made available to APS for production and marketing by AV/MD is not clear at the present time. Since they were produced under contract from NMAC, the federal government holds titles to them. If the other members of the EMRB that are currently reviewing these slide-tapes agree that they are of high quality and suitable educational instruments, the Education Office will attempt to procure title to them from NMAC. Should this be successful, then the materials will be revised utilizing the information obtained from the student evaluations and from the reviews of the members of EMRB. The revised slide-tapes will then be produced and marketed AV/MD. Although NMAC has been approached in an unofficial way concerning their posture on this matter, they have given no indication whether they will grant title to these materials to APS.

b) Marketing of Renal and Cardiac Slide-Tapes by AV/MD. These 14 slide-tapes were the result of a similar extensive mechanism of development, peer review and student evaluation. Preliminary versions

of the renal slide-tapes were exhibited at the Spring Meeting of the Society in April 1975, and reaction was quite favorable. All 14 slide-tapes were turned over to AV/MD last summer, and production prototypes were displayed at the Fall Meeting of the Society in San Francisco.

The sales of these materials have been more vigorous than anticipated, perhaps reflecting better than anything else, peer acceptance. Each slide-tape is marketed individually at a cost of \$45. The complete set of renal slide-tapes sells for \$320, and the complete set of cardiac slide-tapes for \$240. By mid-November of 1975, more than a 100 sets each of the renal and the cardiac slide-tapes had been ordered, as well as 130 single units. According to the current agreement between APS and AV/MD, APS is to receive 40% of net profit on sales of these materials. To date, APS has received a payment of \$8,000 from AV/MD. This \$8,000 will help offset the \$18,000 that the Society has invested in the audiovisual program to date. The Education Committee is now in the process of contacting foreign medical schools to make them aware of the availability of these materials. It is anticipated that these schools will represent a substantial market.

c) Development of the Renal and Cardiac Electrophysiology Slide-Tape Funded by APS. As a result of the decision of Council last spring to provide Society funds for the further development of slide-tape materials, the Education Committee established a sub-committee called the Audiovisual Production Sub-Committee (AVPC) which is charged with on-going management of the audiovisual program. It is the responsibility of AVPC to identify authors for the production of materials in areas designated by the Education Committee, to work closely with authors and APS Education Staff in coordinating the scheduling of workshops, script and art preparation, peer review and student evaluation. This subcommittee is to report at regular intervals to the chairman of the Education Committee on progress and problems. The Sub-Committee is chaired by Dr. Robert Gunn, with Franklyn Knox, Edward Schneider and Robert Fellows as members. Membership on AVPC is for a period of two years.

The Education Committee decided that it would be best to complete the series in renal and cardiac physiology before entering other areas. Consequently, the following authors and topics were selected:

Hypnatremia - H. Frazier

Regulation of Potassium Excretion - F. Wright

Metabolic Acidosis - H. Bleich

Edema - C. H. Coggins

Basic Membrane Electrophysiology - H. Fozzard

Cardiac Electrophysiology - H. Fozzard

Electrical Anatomy of the Heart - R. Childers

Vector Cardiography - M. Amsdort

Last Fall, initial workshops were held involving authors, APS staff and education consultants from the University of North Carolina. Content and methods were discussed and decided upon. At the moment, 5 scripts (including pre- and post-tests) have been prepared on the renal topics and 5 on cardiac topics. Two of the renal scripts have proceeded to the storyboard stage (preliminary art). On March 19 and 22, groups of medical students at George Washington School of Medicine will evaluate these preliminary materials. They will also be submitted to AVPC for scrutiny. As other storyboards are completed, these will follow a similar review. The results of these reviews will then be transmitted to the authors for further revision. It is planned that a semi-final version of each of the 10 slide-tapes will be ready for review by members of EMRB and by medical student groups at George Washington, Georgetown and Harvard Universities in late May. Criticism received from these reviews will be utilized in preparing the final versions that will be produced and marketed by AV/MD in September.

With continued financial support for the audiovisual program, the Education Committee plans to launch the preparation of a series of slide-tapes on the physiology of vision and hearing in late spring.

**2. The Educational Materials Review Board:** The Education Committee has established a group called the Educational Materials Review Board (EMRB) to provide peer review of educational materials produced both by the Society and others. Members of the group are called upon, as the need arises, to review and criticize educational materials generated in our audio-visual production program. It is also anticipated that in the near future, the Education Committee will conduct another survey of audiovisual materials in the area of physiology produced privately and commercially. EMRB members will be called upon to provide the expertise for that survey. Lastly, once each year, members of the EMRB are called upon to submit abstracts of valuable educational materials and review articles that would be of interest to teachers of physiology. These abstracts are to be published in the April issue of The Physiology Teacher and will be provided in the May issue of The Physiologist.

The membership responded enthusiastically to the request for service on the EMRB. At the moment, the board has a total of 104 distinguished members distributed in the various sub-specialties of physiology. The call for abstracts from EMRB members went out in late February and so far, 15 have been received.

**3. Grant Negotiations with the Exxon Education Foundation:** The Education Committee had submitted, over a year ago, a proposal to the Exxon Education Foundation for funds to establish a videotape reference, preview and distribution facility for audiovisual materials in the field of physiology. After considerable interchange between the Education Office and the Exxon Foundation, the latter offered a grant of \$10,000 for the purpose. It was made clear to the Exxon Foundation that this sum would be inadequate to meet the needs of the proposal, and that in order to establish the audiovisual library, support at this level

would be required for several consecutive years. At this juncture, the Exxon Foundation withdrew their offer of the \$10,000 grant.

The Education Committee plans to revise the proposal for the videotape reference library in the amount of ca. \$45,000 and submit it, with Council's approval, to the National Fund for Medical Education in the fall.

4. Negotiations with the Bureau of Health Education: In early 1975, the Education Committee approached the newly-formed Bureau of Health Education in Atlanta as a possible source for funding the joint APS/BSCS proposal for the development of curriculum innovations in human biology and health education. As it developed, BHE was not interested in considering the APS/BSCS proposal. However, BHE expressed interest in APS participation in the so-called Berkeley Model Project, a system of health education being introduced in grades 4-7 in the public schools in 125 locations in the United States. The Committee Chairman was given some of the curriculum materials to examine. It was quite clear that, on a scientific basis, these materials were generally out of date, and in some instances, inaccurate. It was suggested to BHE that APS could audit the curriculum materials and provide physiologist consultants at the various project sites around the country. BHE agreed and suggested that APS prepare a preliminary contract proposal for this purpose. Such a proposal was prepared and submitted to Council at the April 1975 meeting for approval. The approved proposal was then presented to BHE in May 1975. BHE indicated that APS would shortly receive a request for a sole source proposal. However, no request came during the summer months. Finally, in mid-October, the Committee Chairman met again with a representative of BHE and was informed that BHE was in the midst of establishing program priorities and would not begin new ventures until priority guidelines were clear. In any case, the representative indicated that the Berkeley Model Project would receive little further emphasis by BHE. This was a complete reversal of BHE's position of several months previously. It was clear, at this point, that little further progress would be made at BHE. To gain some insight into the problem, the Committee Chairman and Dr. Orr Reynolds met with Dr. Kenneth Endicott of the Health Services Administration and discussed the problem. Dr. Endicott suggested that we approach the newly-forming Institute of Health Education, a group that will disburse private (mainly insurance funds) funds in support of educational innovations. Once this group is functional, the Committee will contact them concerning the original APS/BSCS proposal.

5. The Physiology Teacher: Since there has been a gradual decline in subscriptions (1100 in 1975) for The Physiology Teacher despite promotional efforts, the Committee at its December meeting, discussed the possibility of combining it with The Physiologist in a new format and that publication be increased to six issues per year. It was estimated that the cost of the combined publication would be only slightly higher than for The Physiologist alone. The Committee recommended that Dr. Reynolds make this proposal to the Publications Committee for their consideration.



6. The 1976 Refresher Course at Philadelphia: The Organizing Committee of the Fall Meeting in Philadelphia requested that the 1976 Refresher Course deal with a neurophysiological topic in order to be complementary to a Neuroscience Symposium to be held at the Meeting. Accordingly, the Committee appointed Dr. Donald R. Humphrey (Emory University) organizer of the Refresher Course. The course will treat Sensorimotor Systems. A tentative program is listed below:

PRELIMINARY PROGRAM FOR APS REFRESHER COURSE

August 16, 1976 - 9:00 AM - 3:30 PM

Sensorimotor Systems - Introductory Remarks: D. Humphrey

1. Somatosensory Primary Afferent Fibers: Response Properties and Central Terminations. D. Whitehorn
2. Principles of Information Processing in Ascending Somatosensory Pathways. P. Grigg
3. What the Brain Tells the Sense Organs: Descending Control in Somatosensory Systems. D. Stoney
4. Spinal Regulation of Muscle Force and Length. J. C. Houk
5. Cerebral Control of Voluntary Movement. D. Humphrey

Jack L. Kostyo, Chairman  
APS Education Committee

PROGRAM COMMITTEE REPORT  
TO THE SOCIETY BUSINESS MEETING  
APRIL 13, 1976

A total of 1226 abstracts were received for this year's Spring Meeting. After transfers to and from other societies, 1168 abstracts were programmed, 805 in slide sessions and 363 in poster sessions. In addition, 38 abstracts were received through the International Society for Oxygen Transport to Tissues, (IOTT) our guest society for this meeting. There were 73 slide sessions and 21 poster sessions. The poster sessions each contained more abstracts than the slide sessions so that about 30% of the abstracts were presented in poster sessions.

This year's meeting contained several new features.

1. The Colloquium on Oxygen and Physiological Function which runs for six half-day sessions. This is an intersociety colloquium co-sponsored by APS and IOTT and organized by Dr. Frans Jöbsis.
2. The three clinical symposia on Disturbances in Body Fluid Osmolality organized by Drs. Andreoli, Grantham and Rector.
3. Abstracts were all programmed this year as intersociety. That is, a unified list of session topic categories was drawn up by FASEB, and each member society was given responsibility for programming a portion of the list regardless of the society membership of the author. A straw poll of APS members present strongly indicated that this represented an improvement in programming abstracts.

I thought it might be of some interest to the membership to know how the program of short communications is put together and what happens to the abstracts once they are submitted. The process is really fairly simple. Upon receipt of the abstracts, the Executive Secretary arranges them in groups according to the session topic categories indicated by the authors. The grouped abstracts are then mailed to the seven members of the Program Committee who each have expertise in some physiological specialty area. The Executive Secretary who is ex officio member also programs some abstracts. I, for example, received all of the abstracts related to endocrinology, metabolism and reproduction. I read all of the abstracts and try to arrange them in some meaningful groupings of ten to twelve for oral presentations or fifteen to twenty for poster sessions. The abstracts received do not always fit well with predetermined session titles and it therefore becomes necessary to come up with new session titles that better describe the contents of the session. For example, 22 papers submitted by the authors under the categories of Reproduction, Sex Hormones, Pituitary or Neuroendocrines all dealt with the control of LH secretion, and so they were grouped into two sessions titled Control of LH Section I and II. By and large this process of rearranging of abstracts has led to better sessions and has been well received. An additional complication in programming is that some authors want poster sessions while others

indicate a preference for slides. Every effort was made to meet the author's requests, but in some cases for reasons of space or best fit of subject matter some abstracts had to be switched from slide to poster sessions.

The Executive Secretary receives all of the programmed sessions from the members of the Program Committee and then tries to fit them into the overall schedule, making every effort to avoid as many conflicts as possible. Some conflicts, however, are inevitable. We are grateful to Dr. Reynolds for the magnificent job he did for this meeting, despite the complications of programming the Colloquium and an unprecedented large number of symposia.

The Program Committee recognizes that greater sensitivity to the programming needs of specialty groups within the Society may combat the growing trend toward fragmentation within physiology. We are seeking to open channels of communication with special interest groups within the Society and with related societies with regard to selection of session chairmen, symposia topics and so forth. Each member of the Program Committee is charged with responsibility for communicating with specialty groups in his area and serving as the liaison for the specialty groups with the Program Committee. The Program Committee has met with members of the Society of General Physiologists and the Bioengineers to explore possible joint sponsorship of symposia. Further contacts with other societies are anticipated. We will attempt further to coordinate specialty group functions by clustering like scientific sessions on consecutive days where possible.

Finally, the Program Committee is most anxious that programming of the two annual meetings of the Society come as close as possible to meeting all of the needs of the membership. The Committee welcomes suggestions and urges the membership to transmit any ideas or criticisms (positive or negative) to me or Dr. Orr Reynolds.

Note: At a meeting of the Council subsequent to the delivery of this report at the general business meeting, ways of unifying and improving the programming process were discussed. An Ad Hoc Committee chaired by Dr. Alfred Fishman and consisting of two members of the Program Committee and three members of Council will be looking into possible schemes for reorganizing the Program Committee.

H. Maurice Goodman, Chairman

## INTERUNION COMMISSION ON COMPARATIVE PHYSIOLOGY

Last year the International Unions of Biological Sciences (IUBS), Physiological Sciences (IUPS), and Pure and Applied Biophysics (IUPAB) voted to establish an Interunion Commission on Comparative Physiology and invited Dr. Knut Schmidt-Nielsen to serve as Chairman. The Commission is now being established, pending final approval by the three unions. The proposed membership is:

Professor Liana Bolis  
Institute of General Physiology  
University of Rome  
Rome 00185, Italy

Mailing Address: 23, Place du Bourg de Four  
1204 Geneva, Switzerland

Dr. Pierre Dejours  
Laboratoire de Physiologie Respiratoire  
Centre National de la Recherche Scientifique  
23, rue Becquerel  
67 - Strasbourg 3, France

Professor Richard Keynes  
Department of Physiology  
Cambridge University  
Downing Street  
Cambridge CB2 3EG, England

Dr. Simon Maddrell  
Department of Zoology  
Cambridge University  
Downing Street  
Cambridge CB2 3EJ, England

Professor Michael Sleight  
Department of Biology  
University of Southampton  
Bassett Crescent East  
Southampton SO9 3TU, England

Professor Knut Schmidt-Nielsen  
Department of Zoology  
Duke University  
Durham, North Carolina 27706 U.S.A.

It is very much hoped that the Commission on Comparative Physiology will become a useful and effective instrument which contributes to the development of matters of concern to comparative physiologists as well as to the three sponsoring unions.

One of the potentially important functions of the Commission is to aid in the planning and organization of international conferences on subjects of concern to comparative physiologists. Any person interested in suggesting or in organizing meetings or symposia on subjects of comparative physiology should feel free to contact the Commission about such plans. The Commission will assist in establishing contacts and suggesting possible approaches.

The establishment of the Interunion Commission is of particular interest in connection with the decision of APS to authorize a task force on comparative physiology, jointly with the Division of Comparative Physiology and Biochemistry of the American Society of Zoologists. Comparative physiologists, whether within these societies or outside, should now have improved opportunities for communication. In addition to the direct collaboration that may develop between the Joint Task Force and the Interunion Commission, the Commission represents a formally approved link between comparative physiologists everywhere and the three sponsoring unions.

Interested comparative physiologists, whether in academic institutions or otherwise interested in furthering comparative physiology, may contact the Chairman of the Commission, Professor K. Schmidt-Nielsen, Department of Zoology, Duke University, Durham, N. C. 27706.

---

#### IUPS NEWSLETTER

A limited number of the September 1975 IUPS Newsletter is available at APS Headquarters. Should you wish a copy direct your request to the Executive Secretary, American Physiological Society, 9650 Rockville Pike, Bethesda, Maryland 20014.

## NEWS FROM SENIOR PHYSIOLOGISTS

The following are recent replies to birthday greetings:

Bob Kehoe wrote Bruce Dill of his success in surmounting infirmities:

Thanks very much for your nice note. I have had the misfortune to have developed some of the disabilities of old age, including some ocular cataracts, in association with a degree of bilateral retinal degeneration. In view of the work I want to do, my ocular situation is an infernal nuisance. While I have retired, I did so with a long series of experiments on human subjects as yet unpublished. I've had to turn over the preparation and publication of the raw data (which are of the utmost importance) to a small group, including a statistician, but I hope to comment fairly extensively on the issues. I think the Federal Government will make it difficult, if not impossible, to carry out the type of experiments which I have done which relate to lead absorption in man within safe limits. I think these are of crucial importance in the field of occupational medicine. At any rate, the data will be available to other investigators, whether or not I have a chance to discuss them so what I have done in this field will not be wasted.

I've been so nearly isolated from the affairs of life for the past two years that I feel very much indeed on the outside. I've now begun again to get to my office every day so as to be in contact with some of what goes on. I have a most competent secretary and the staff of Kettering Laboratory including Raymond Suskind, the present Director, give me no cause for discouragement nor lack of confidence. So I shall continue as best I can.

Paul Reznikoff to Hal Davis:

Thank you very much for your cordial greeting on my 80th birthday. I am still as active as possible, seeing patients, attending school and hospital meetings and trying to keep up with hematologic advances, which I find more and more complex with advancing age. We are winterizing our summer home at Woods Hole, Massachusetts, where I spent many happy summers at the Marine Biological Laboratory and I expect to "retire" to this place in the not too distant future.

Tom Magath wrote Hy Mayerson that he does his gardening and travels a good deal. He and Hy Essex celebrated their joint birthdays together at a little party with the few friends of their vintage. They have been doing this for a long time.

Victor Guillemin wrote Bruce Dill:

It was mighty kind of you to remember my 80th birthday. I feel remiss at not remembering your 85th. All I can say is that I shall try and to better on your 90th. I do not have a job with a name on it but I am putting in quite a few hours on my new book every day. It is progressing nicely and I am learning a lot.

Eileen and I are leading a quiet, pleasant life, taking walks in all kinds of weather, reading a lot and seeing our children now and then. We both send our greetings and best wishes to Chloris and to you.

Edward Allen Boyden to Bruce Dill:

The 90th birthday was a memorable occasion: hosts of letters from former colleagues. The Medical Faculty had a big reception in the Health Sciences Lobby, with coffee and a cake 4 meters long. I was presented with an engraved barometer, a cornucopia of flowers 3 ft. high (still blooming), two humorous sketches from colleagues of the Medical Library staff and the Department of Medical Illustration - the latter including my Irish Setter. The Medical Dean spoke, and mail grams were read from the University of Minnesota Medical Faculty of which I was a part for 23 years: one more than the 22 at the University of Washington. The newspapers had a "holiday" with their pronouncements: "Researcher, 90, not planning to retire again."

Edward also reported that the three-year program on the development of the monkey lung is now ready to submit for publication with its 25 figures. This study suggests how the human lung could have been derived from that of an early primate.

---

Max Kleiber - January 4, 1893 - January 5, 1976

Mrs. Margaret Kleiber sent Dr. Dill word of the memorial planned for her husband (See the February 1976 issue of The Physiologist). Max left a wide circle of admirers, especially his students many of whom have attained eminence in their own right. He kept in touch with them by correspondence, by lectures across the country and by his letters about his activities that have been published in The Physiologist. One of his major achievements was The Fire of Life that appeared in a revised edition in 1975. A memorial service was held for him in Davis, California, in the Unitarian Church he helped establish.

Harold Bradley - November 25, 1878 - January 4, 1976

Mrs. Ruth Bradley sent Dr. Dill word of memorial plans for Harold. Readers of The Physiologist will recall accounts in his letters of his post-retirement service to the Sierra Club. "As a symbol of his vitality, and as a living memorial to the inspiration he transmitted to students, friends, and family, a Harold C. Bradley Memorial Grove is being established through the Save-the-Redwoods League." Location of the grove will be available from the League, 114 Sansome St., San Francisco, California 94104.

John Ferguson, died in Omaha on January 12, 1976, aged 84. Dr. Ferguson earned his Ph.D. degree at Northwestern University in 1940. He was an Assistant Professor at the University of Alberta before joining the Physiology and Pharmacology Department of Creighton University in 1946; Associate Professor in 1956, and Professor Emeritus in 1963. His scientific publications ranged over years 1925 - 1961.

## GEORGE HOYT WHIPPLE

August 28, 1878 - February 1, 1976

At his death aged 97, Dr. Whipple was the oldest member of our Society. He was elected to membership 64 years ago. He shared the Nobel Award for Medicine and Physiology in 1934. He was the organizer and first dean of the School of Medicine and Dentistry, University of Rochester.

Dr. Whipple was born in Ashland, New Hampshire. He graduated A.B. from Yale College in 1900, and M.D. from Johns Hopkins University in 1905. He was Associate Professor of Pathology at Hopkins 1908-1914, and Professor of Research Medicine at University of California, 1914-1921.

At Rochester (from 1921) he planned the School, and served as Professor of Pathology as well as dean, until his retirement in 1955. During those years he pursued his comprehensive researches on hemoglobin formation in experimental anemia, educated many colleagues in experimental pathology, taught the student classes in pathology, and administered the School.

In 1917, Dr. Whipple demonstrated to the American Physiological Society his early results on hemoglobin regeneration in dogs following depletion by bleeding. In 1934, he gave a general lecture on this subject to the Federation.

Later in the same year he received the joint award of the Nobel Prize in Medicine and Physiology. This was the second instance in which a member of the Society was recipient of a Nobel award (the first was J. J. R. Macleod in 1923).

Many other recognitions came to Dr. Whipple. Honorary doctorates were conferred by thirteen universities. Special medals and diplomas came from seven academies, chiefly European. He served as a trustee of the Rockefeller Foundation. He was elected to the National Academy of Sciences in 1929, being therefore a member for 46 years.

The American Society for Experimental Pathology formed in 1913 as a member of the Federation. Dr. Whipple participated in its organization, and was its president in 1925.

A note from Dr. Whipple describing honors received on his 90th birthday, was published in The Physiologist, 13: 42, 1970. It includes verses written by Wallace Fenn.

A later note was published in The Physiologist, 17: 96, 1974, mentioning the celebration of Dr. Whipple's 95th birthday, and the dedication of his birthplace in Ashland as a museum in care of the Ashland Historical Society, open to the public on certain summer afternoons.



In addition to his work as a medical scientist, Dr. Whipple cultivated a certain facility in salmon fishing and pheasant hunting.

A book-length biography is entitled: "George Hoyt Whipple and His Friends" by G. W. Corner (Lippincott, 1963); with a list of 330 publications and joint publications of Dr. Whipple.

A man of great vigor in scientific work and of unobtrusive decision in affairs, Dr. Whipple valued the individuals with whom he dealt. Among his outstanding activities, Dr. Whipple wished most to be remembered as a teacher. Three generations of colleagues and students think of him with gratitude.

Edward F. Adolph

---

# **PIO ISTITUTO DI S. SPIRITO ED OSPEDALI RIUNITI - ROMA**

## **ANNOUNCEMENT OF COMPETITION for the 1976 "Giovanni Maria Lancisi" International Prize for Medical Science (Lit. 10,000,000)**

### **Art. 1**

The "Pio Istituto di S. Spirito" General Regional Hospital Agency, registered in Rome, in collaboration with the Accademia Lancisiana di Roma, hereby announces a competition for the 1976 "G. M. Lancisi" International Prize for Medical Science, of Lit. 10,000,000, to be assigned to the author or authors of an original, unpublished scientific work dealing with the following subject, chosen by the special committee:

### **"CHRONOBIOLOGY AND MEDICINE"**

### **Art. 2**

Those intending to enter for the Prize should send the following to: "Premio Internazionale Scientifico "G. M. Lancisi" presso la Presidenza del Pio Istituto di S. Spirito ed Ospedali Riuniti, Borgo S. Spirito, 3 - 00193 Roma (Italy)" by and not later than 12.00 hours of the 31st December 1976:

- 1) Application on plain paper to participate in the competition;
- 2) Nine copies of the work entered for the Prize, in Italian or in English, each copy bearing the signature of the author or authors. All works, accompanied by positive copies of any illustrations, should include a synopsis in Italian or in English, of not more than one thousand words, as well as a full bibliography of the subject dealt with;
- 3) Certificates testifying to the birth, the residence and the citizenship of the competitor or competitors;
- 4) A copy of the curriculum vitae and of the scientific activity of the competitor or competitors, with a list of published works;
- 5) A declaration signed by the author or authors testifying to the original nature of the work, the institute or other place where the work has been carried out, that said work is unpublished and that it has not been submitted and will not be submitted, until such time as the "G. M. Lancisi" Prize has been assigned, to other prize competitions.

### **Art. 3**

The Prize is assigned according to the decision of a scientific committee appointed by the Chairman of the Accademia Lancisiana, and said decision is final.

### **Art. 4**

The Prize may not be assigned more than once to the same person, even when said person participates jointly with others.

### **Art. 5**

Further information and clarification may be requested by applying to: "Premio Internazionale Scientifico "G. M. Lancisi" presso la Presidenza del Pio Istituto di S. Spirito - Borgo S. Spirito, 3 - 00193 Roma (Italy)".

Rome, November 1975.

