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The Physiologist

A Publication for Physiologists and Physiology
Orr E. Reynolds, Editor

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- Microcirculation
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HONORS AND AWARDS

The Institute of Medicine, established by the National Academy of Sciences for "the protection and advancement of the health of the public" recently elected 40 individuals to a first term. Three APS members were elected, their terms beginning January 1, 1978.

Alexander Leaf, Jackson Professor of Clinical Medicine, Harvard Medical School; *Arnold S. Relman,* Editor, New England Journal of Medicine, and Professor of Medicine, Harvard Medical School; *Robert L. Van Citters,* Professor of Physiology and Biophysics, University of Washington School of Medicine, Seattle.

1978 SPRING MEETING
APS RELATED SPECIAL FUNCTIONS

The following APS related special functions have been programmed as indicated:

SATURDAY:
APS Council Meeting – 9 AM – Howard Johnson's Regency, Pacific Rm. A.

SUNDAY:
APS Council Meeting – 9 AM – Howard Johnson's Regency, Pacific Rm. A.
Red Cell Club Meeting – 1:30 PM – Holiday Inn, Ballroom C.
Association of Chairmen of Departments of Physiology Dinner – 6 PM – Holiday Inn, Ballroom B.

MONDAY:
Respiration Subgroup Organizational Meeting – 4:30 PM – Convention Hall, Rm. G.
Speaker: S. I. Said
Neurophysiology Cash Bar – 5 PM – Howard Johnson's Regency, Katano Rm.
Respiration Group Dinner – 6:30 PM – Howard Johnson's Regency, Dorado Rm.
Speaker: G. Majno
Neuroendocrine Discussion Group Dinner – 6:30 PM – Howard Johnson's Regency, Caribe Rm. Topic: Anatomy of Peptidergic Neurons and Biosynthesis of Neuropeptides.
Speaker: M. J. Brownstein.
Physiology of Exercise Mixer – 8 PM – Colony, Terrace Rm.

TUESDAY:
APS Business Meeting – 4:30 PM – Convention Hall, Room G.
Circulation Group Dinner – 6 PM – Howard Johnson's Regency, Dorado Rm. Presentation of the Harold Lamport Award; Presentation of the C. J. Wiggers Award; Wiggers Award Lecture. Topic: Cardiopulmonary Receptors – Their Role in Circulatory Control.
Speaker: J. T. Shephard.
Gastrointestinal Section of APS Dinner and Lecture – 6 PM – Howard Johnson's Regency, Madrid Rm. Topic: Autoregulation of Sodium Absorption at the Cellular Level.
Speaker: S. G. Schultz.
Renal Dinner – 6 PM – Holiday Inn, Ballroom A.
Temperature Regulation Dinner – 6:30 PM – Howard Johnson's Regency, Guadelupe Rm.
Speaker: K. Schmidt-Nielsen.

WEDNESDAY:
Perinatal Biologists Dinner – 6 PM – Howard Johnson's Regency, Alhambra Rm. Topic: A Specific Mechanism for O_2 and CO Transport in Placenta and Lung.
Speaker: G. H. Gurtner.

THURSDAY:
APS Business Meeting – 4:30 PM – Convention Hall, Room G.

APS SPONSORED AND CO-SPONSORED SYMPOSIA

SYMPOSIUM: Pulmonary Edema
SESSION 1
Ultrastructural and Functional Bases for Exchange of Water and Protein

MONDAY AM
Chaired by: A. P. FISHMAN

9:00 Ultrastructure of Lung Relevant to Water and Protein Exchange.
E. WEIBEL. *Univ. of Bern, Bern, Switzerland.*

9:30 Endothelial and Epithelial Permeabilities in the Lung.
E. SCHNEEBERGER. *Children's Hosp. Med. Ctr., Boston.*

10:00 Transendothelial Movement of Macromolecules by Pinocytosis.
M. SIMONESCU. *Yale Univ. Sch. of Med., New Haven.*

10:30 Surface Forces and Water Exchange.
J. GIL. *Univ. of Pa. Sch. of Med., Philadelphia.*

11:00 Forces Governing Water Movement in the Lungs.
A. GUYTON. *Univ. of Mississippi, Jackson.*

11:30 Hemodynamic Pulmonary Edema.
A. P. FISHMAN. *Univ. of Pa. Sch. of Med., Philadelphia.*

SYMPOSIUM: Angiotensin-Induced Thirst; Peripheral and Central Mechanisms

MONDAY AM
Chaired by: M. J. FREGLY

9:00 Introduction. M. J. FREGLY

9:05 Historical Development of Angiotensin-Induced Thirst.
J. T. FITZSIMONS. *Cambridge University, England.*

9:30 Beta-Adrenergic-Induced Thirst and its Relation to the Renin-Angiotensin System.
D. J. RAMSAY. *Univ. of California, San Francisco.*

9:55 Central Receptor Sites for Angiotensin-Induced Thirst.
J. B. SIMPSON. *Univ. of Washington, Seattle.*

10:20 Central Pathways for Angiotensin-Induced Thirst.
G. J. MOGENSON. *Univ. of Western Ontario, London, Canada.*

10:45 Pharmacology of Angiotensin-Induced Thirst.
W. B. STEVERS. *PA State Univ., Hershey.*

11:10 Attenuation of Thirst by Certain Sterioids.
M. J. FREGLY. *Univ. Florida, Gainesville.*

11:35 Angiotensin-Induced Thirst: Some Unanswered Questions.
E. STRICKER. *Univ. of Pittsburgh, Pittsburgh.*

SYMPOSIUM: Overview of the Biology of Aging
Co-sponsored with Gerontological Society

MONDAY AM
Chaired by: R. N. BUTLER, *NIH*

9:00 Introduction. R. N. BUTLER

9:10 Genetics and Evolution.
G. M. MARTIN. *Univ. of Washington, Seattle.*

9:50 Discussion.

10:05 Physiological Decline.
E. J. MASORO. *Univ. of Texas, San Antonio.*

10:45 Discussion.

11:00 Loss of Adaptive Mechanisms.
R. C. ADELMAN. *Fels Res. Inst., Temple Univ. Med. Sch.*

11:40 Discussion

TUTORIAL WORKSHOP: Is there a Computer in your Future?

MONDAY AM
Chaired by: L. D. PARTRIDGE

9:00 Introductory Comments: Changing Outlook in Computing.

9:25 Basic Statistical Processing.
E. O. ATTINGER. *Univ. of Virginia*

9:50 Physiological Modelling.
J. E. RANDALL. *Indiana Univ.*

10:15 Instruments Incorporating Dedicated Computers.
J. G. WEBSTER. *Univ. of Wisconsin*

10:40 Experimental Management and Signal Processing.
PETER KATONA. *Case Western Reserve Univ.*

11:05 Analysis and Display of Structural Information.
GABOR HERMANN. *SUNY, Buffalo*

11:30 Discussion

SYMPOSIUM: Pulmonary Structure

MONDAY PM
Chaired by: J. C. HOGG

1:30 Bronchial Mucosal Cells.
L. REID. *Harvard University.*

2:15 The Bronchial Mucosal Barrier.
J. C. HOGG. *University of British Columbia.*

3:00 Structural Aspects of Gas Exchange.
J. FORREST. *McMaster University.*

3:45 Lung Growth.
J. BRODY. *Boston University.*

4:30 Airway Smooth Muscle and Nerves.
J. RICHARDSON. *McGill University.*

SYMPOSIUM: Gastric Motility and Gastric Emptying

MONDAY PM
Chaired by: J. H. SZURSZEWSKI

1:30 Introduction. J. H. Szurszewski

1:35 Gastric emptying of liquids and solids: Roles of proximal and distal stomach.
K. A. KELLY. *Mayo Fndn.*

2:00 Discussion

2:10 Effect of distal stomach on particle size.
J. H. MEYER. *VA Hosp., Sepulveda*

2:45 Discussion

2:55 Some details of duodeno-osmo receptor function.
J. N. HUNT. *Baylor Col. of Med.*

3:20 Discussion

3:30 Neuronal control of gastric emptying.
E. E. DANIEL. *McMaster Univ.*

3:40 Discussion

3:50 Relationship between gastric motility and gastric emptying: Role of GI Hormones.
J. H. SZURSZEWSKI. *Mayo Fndn.*

4:15 Discussion

SYMPOSIUM: Modulation of Synaptic Excitability*

MONDAY PM

Chaired by: F. F. WEIGHT

1:30 Amino acid synergism at an excitatory synapse.
R. McBURNEY. *NIH*

2:00 Long-lasting synaptic potentials and the modulation of synaptic excitability.
F. F. WEIGHT. *NIMH.*

2:30 Role of serotonin and cyclic nucleotides in the potentiation of synaptically activated muscle contraction.
I. KUPFERMANN, D. MANDEBAUM, H. SCHONBERG, and K. R. WEISS. *Columbia Univ.*

3:00 Local hormonal modulation of neural activity in Aplysia.
E. MAYERI. *Univ. of California, San Francisco.*

3:30 Modulatory actions of norepinephrine in mammalian central nervous system.
D. J. WOODWARD. *Univ. of Texas, Dallas.*

4:00 Long-lasting modulation of synaptic transmission in hippocampus.
G. S. LYNCH. *Univ. California, Irvine*

*Supported in part by Hoffman-La Roche Inc., Smith, Kline, and French Laboratories, and Burroughs Wellcome Co.

SYMPOSIUM: Pulmonary Edema

SESSION 2

Fluid Accumulation in the Lungs

TUESDAY AM

Chaired by: E. M. RENKIN

9:00 Cellular and Interstitial Edema.
C. TEPLITZ. *Brown Univ. Med. Ctr., Providence.*

9:30 Routes of Interstitial and Alveolar Edema.
N. STAUB. *UCSF.*

10:00 Collagen, Elastin and Proteoglycans: The Matrix for Fluid Accumulation in the Lung.
D. PROCKOP. *Rutgers Med. Sch., Piscataway.*

10:30 Distribution of Water and Proteins in the Lungs in Pulmonary Edema.
R. EFFROS. *UCLA.*

11:00 Lymph as a Measure of the Composition of Interstitial Fluid.
E. M. RENKIN. *Univ. of Cal. Sch. of Med., Davis.*

11:30 Lymph Composition and Flow in Experimental Pulmonary Edema.
K. BRIGHAM. *Vanderbilt Univ. Sch. of Med., Nashville.*

SYMPOSIUM: Peptides in Neurobiology*

TUESDAY AM

Chaired by: M. J. BROWNSTEIN and H. GAINER

9:00 Introduction. M. J. BROWNSTEIN

9:10 Localization of peptides in the central nervous system.
R. ELDE. *Univ. of Minnesota Sch. of Med.*

9:35 Biosynthesis of peptides: ACTH and Endorphins.
R. MAINS and B. EIPPER. *Univ. of Colorado Sch. of Med.*

10:00 Identification of characterization and assay of peptide receptors.
K. KATT. *N.I.H.*

10:25 Intermission

10:35 Electrophysiological studies of peptides.
R. NICOLL. *Univ. of California, San Francisco.*

11:00 Peptide Pharmacology.
W. VALE. *Salk Inst.*

11:25 Peptides in invertebrates.
J. TRUMAN. *Univ. of Washington.*

11:50 Concluding remarks.
H. GAINER. *N.I.H.*

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SYMPOSIUM: Cell Biology and Aging

Co-sponsored with Gerontological Society

TUESDAY AM

Chaired by: L. HAYFLICK, *Children's Hosp. Med. Ctr., Oakland.*

9:00 Introduction. L. HAYFLICK

9:05 Cellular Senescence *In Vitro.*
V. J. CRISTOFALO. *Wistar Inst.*

9:40 Cellular Replication *In Vivo* and *In Vitro.*
E. L. SCHNEIDER. *NIH.*

10:15 Intermission

10:20 Cellular Immune Response.
T. MAKINODAN. *Wadsworth VA Hosp., UCLA.*

10:55 Studies of Age-Associated Diseases *In Vitro.*
S. GOLDSTEIN. *McMaster Univ., Canada.*

11:30 Complementation Between a Thymidine Kinase Deficient Cell Line and Post-Mitotic (Senescent) Human Diploid Cells.
T. H. NORWOOD and C. J. ZEIGLER. *Univ. of Washington, Seattle.*

11:40 General Discussion.

SYMPOSIUM: Water Transport in Epithelia.

TUESDAY AM

Chairman: JAMES A. SCHAFER

9:00 Introduction. J. A. SCHAFER. *Univ. of Alabama in Birmingham*

9:05 Cell Shape as an Indicator of Volume Reabsorption in the Proximal Nephron.
D. J. WELLING and L. W. WELLING. *Kansas City Mo. VA Hosp. and Univ. of Kansas Med. Ctr.*

9:40 Dimensions of Cells and Lateral Intercellular Spaces in Living Necturus Gall Bladder.
K. R. SPRING and A. HOPE. *NIH.*

10:15 The Distribution of Sodium Pump Sites in Transporting Epithelia.
D. R. DiBONA and J. W. MILLS. *Harvard Med. Sch.*

10:50 Electron Microprobe X-ray Analysis of Ion Concentrations Within Epithelial Compartments.
B. L. GUPTA. *Univ. of Cambridge.*

11:25 Mechanisms for Isotonic Volume Absorption in the Proximal Nephron.
T. E. ANDREOLI. *Univ. of Alabama in Birmingham.*

SYMPOSIUM: Growth Hormone

TUESDAY PM

Chaired by: J. L. KOSTYO

1:30 Introduction. J. L. KOSTYO

1:35 Physical-chemical studies of human pituitary growth hormone.
T. A. BEWLEY. *Univ. of California, San Francisco.*

2:00 Naturally occurring structural variants of human growth hormone.
U. J. LEWIS. *Scripps Clin. and Res. Fndn.*

2:30 Fragmentation of human growth hormone with proteolytic enzymes.
A. E. WILHELMI. *Emory Univ. Sch. of Med.*

3:00 Neuroendocrine control of episodic growth hormone secretion.
J. B. MARTIN. *McGill Univ.*

3:30 Receptors for growth hormone and their regulation.
J. ROTH. *NIAMDD, NIH.*

4:00 Early interactions of growth hormone and target tissues.
H. M. GOODMAN. *Univ. of Massachusetts Med. Sch.*

SYMPOSIUM: Neurotoxins as Molecular Probes of Sodium Channels

TUESDAY PM

Chaired by: W. A. CATTERALL

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1:35 The Interaction of Saxitoxin and Tetrodotoxin with Sodium Channels in Excitable Membrane.
J. M. RITCHIE. *Yale University*

2:10 Biochemical Studies of Tetrodotoxin Association with a Protein Component of Electrically Excitable Membranes.
M. A. RAFTERY. *Calif. Institute of Technology.*

2:45 Modifications of Sodium Channels Induced by Batrachotoxin, Aconitine, and Local Anesthetics
B. I. KHODOROV. *Vishnevsky Surgery Institute, Moscow, U.S.S.R.*

3:20 Interaction of Sea Anemone Toxin with Sodium Channels.
M. LAZDUNSKI. *Centre de Biochimie, Nice, France.*

3:55 Neurotoxins as Allosteric Modifiers of Sodium Channels.
W. A. CATTERALL. *University of Washington.*

SYMPOSIUM: The Basic Physiologic Mechanisms of Hypertension

TUESDAY PM

Chaired by: L. TOBIAN

1:30 Physiology of vascular smooth muscle.
A. P. SOMLYO. *Presbyterian, Univ. of Pennsylvania Med. Ctr.*

2:00 Effect of angiotensin II on the brain: relation to fluid and electrolyte balance and the regulation of arterial pressure.
W. F. GANONG. *Univ. of California, San Francisco.*

2:25 Contributions of the central nervous system to hypertension.
W. DeJONG. *Univ. of Utrecht, Holland.*

2:55 Relation of the antero-ventral third ventricular region of the brain to the development and maintenance of experimental hypertension.
M. J. BRODY. *Univ. of Iowa, Iowa City.*

3:20 Mechanisms of the anti-hypertensive actions of adrenergic beta-blockers.
F. J. CONWAY. *Imperial Chemical Industries, Cheshire, England.*

3:50 The causes of increased peripheral vascular resistance in NaCl-induced hypertension.
A. L. MARK. *Univ. of Iowa, Iowa City.*

4:10 The interrelationships of sodium and hypertension.
L. TOBIAN. *Univ. of Minnesota Sch. Med., Minneapolis.*

SYMPOSIUM: Molecular Biology and Aging
Co-sponsored with Gerontological Society

TUESDAY PM

Chaired by: J. R. FLORINI, *Syracuse Univ.*

1:30 Introduction. J. R. FLORINI

1:35 Gene Expression.
R. CHALKLEY. *Iowa Univ.*

2:15 Protein Synthesis.
K. MOLDAVE. *UC Irvine.*

2:55 Intermission

3:00 Selective Degradation of Abnormal Proteins in Mammalian Cells.
A. L. GOLDBERG. *Harvard Med. Sch.*

3:40 Age-Related Changes in Function of Transfer RNA From Rat Liver.
L. L. MAYS, A. E. LAWRENCE, R. W. HO, and S. ACKLEY. *Occidental Coll., Los Angeles.*

3:50 Inverse Correlation Between Species Life Span and Capacity to Activate Hydrocarbon Carcinogens.
A. G. SCHWARTZ and C. J. MOORE. *Temple Univ., Philadelphia.*

4:00 General Discussion.

SYMPOSIUM: Pulmonary Edema
SESSION 3
Excess Water in the Lungs

WEDNESDAY AM

Chaired by: S. PERMUTT

9:00 Mechanical Influences on Water Accumulation in the Lungs (Extracapillary Vessels).
S. PERMUTT. *Johns Hopkins Univ., Baltimore.*

9:30 Bronchial Veins and Pulmonary Edema.
G. PIETRA. *Univ. of Pa. Sch. of Med., Philadelphia.*

10:00 Oxygen Toxicity (Biochemical Aspects).
A. FISHER. *Univ. of Pa. Sch. of Med., Philadelphia.*

10:30 Permeability Pulmonary Edema.
E. ROBIN. *Stanford Univ. Med. Ctr.*

11:00 High Altitude Pulmonary Edema.
R. GROVER. *Univ. of Colorado Med. Ctr., Denver.*

11:30 Respiratory Distress Syndrome.
M. BACHOFEN. *Univ. of Bern, Bern, Switzerland.*

SYMPOSIUM: Neural antigens: Potential probes for neurophysiology

WEDNESDAY AM

Chaired by: W. SHAIN

9:00 Introduction. W. SHAIN

9:05 Detection of brain cell surfact antigens by specific antisera.
M. SCHACHNER, *Harvard Med. Sch., Boston.*

9:30 Recognition of antigenic differences among neurons using antisera to clonal neuronal hybrid cells.
G. D. TRISLER, *AFRRI, Bethesda.*
9:55 Discussion
10:05 Immuno-cytochemistry of tyrosine hydroxylase.
V. M. PICKEL, *Cornell Univ. Med. Ctr., New York.*
10:30 The role of acetylcholine antibodies in myasthenia gravis.
S. H. APPEL, *Baylor Col. Med., Houston.*
10:55 Discussion
11:05 Isolation of population of cells from the central nervous system using specific antibodies.
G. LeM. CAMPBELL, *Temple Univ. Sch. Med.* and *Franklin Inst. Res. Lab., Philadelphia.*
11:30 Biological activities of antibodies injected into the brain.
M. M. RAPPORT, *N.Y. State Psychiatric Inst., New York.*
11:55 Discussion

SYMPOSIUM: Toxic Factors in Shock

WEDNESDAY PM

Chaired by: A. M. LEFER and T. M. GLENN

1:00 The concept of shock factors.
A. M. LEFER. *Thomas Jefferson Univ.*
1:50 Cardiac impairment and shock factors.
S. ROGEL. *Hadassah Med. School, Jerusalem, Israel.*
2:15 Characterization of shock-inducing circulating cardiodepressant substances.
R. D. GOLDFARB and P. WEBER. *Albany Med. Col.*
2:40 General discussion.
3:15 Mechanisms of formation of shock factors.
T. M. GLENN. *Univ. South Alabama Sch. of Med.*
3:45 Simulated splanchnic ischemia and shock factors.
U. HAGLUND and O. LUNDGREN. *Univ. of Göteborg, Sweden.*
4:05 Summary
A. M. LEFER. *Thomas Jefferson Univ.*
4:10 General discussion.

SYMPOSIUM: Centrifugal Control of Sensory Pathways

WEDNESDAY PM

Chaired by: W. D. WILLIS Jr. *Univ. of Texas, The Marine Biomedical Inst., Galveston.*

1:30 Cortical and subcortical descending pathways to the spinal dorsal horn.
J. D. COULTER. *Univ. of Texas Med. Br., Galveston.*
2:00 Pharmacological evidence for the descending inhibition of transmission from primary afferents.
E. G. ANDERSON. *Univ. of Illinois, Chicago.*
2:30 Brainstem modulation of the activity of spinothalamic tract neurons.
W. D. WILLIS. *Univ. of Texas Marine Biomedical Inst., Galveston.*
3:00 Behavioral evidence for centrifugal control of pain.
D. J. MAYER. *Med. Col. of Virginia, Richmond.*
3:30 Physiological factors which activate the intrinsic pain control system.
H. FIELDS. *UCSF Med. Sch.*

SYMPOSIUM: Pulmonary Ventilation

THURSDAY AM

Chaired by: PETER D. WAGNER

9:00 Introduction. P. D. WAGNER, *UCSD, La Jolla.*
9:05 Parenchymal mechanics at the alveolar level.
T. A. WILSON, *University of Minnesota, Minneapolis.*
9:45 Distortion of the lung within the chest.
J. B. WEST, *UCSD, La Jolla.*
10:30 Series or stratified ventilation.
J. PIIPER, *Max Planck Institute for Exp. Med., Göttingen, Germany*
11:15 Collateral ventilation.
H. A. MENKES, *Johns Hopkins University, Baltimore.*

SYMPOSIUM: Fever and Hyperthermia

THURSDAY AM

Chaired by: X. J. MUSACCHIA

9:00 Introductory Comments
9:05 Phylogeny of Fever
M. KLUGER. *Univ. of Michigan, Med. Sch.*
9:25 Ontogeny of Fever.
K. COOPER. *Univ. of Calgary, Fac. Med.*
9:45 Discussion
H. BERNHEIM. *Yale Univ. Sch. of Med.*
C. BLATTEIS. *Univ. of Tennessee Ctr. for Hlth. Sci.*
10:00 Fever versus Hyperthermia.
J. STITT. *John B. Pierce Fndn. Lab.*
10:15 Malignant Hyperthermia.
B. BRITT. *Univ. of Toronto.*
10:35 Discussion
E. ATKINS. *Yale Univ. Sch. of Med.*
M. FREGLY. *Univ. of Florida, Col. of Med.*
10:45 Central Mechanisms of Fever.
W. I. CRANSTON. *St. Thomas' Hosp. Med. Sch.*
11:05 Pathogenesis of Fever.
P. BODEL. *Yale Univ. Sch. of Med.*
11:25 Clinical Aspects of Fever.
E. ATKINS. *Yale Univ. Sch. of Med.*
11:45 Discussion
C. DINARELLO. *Tufts Univ. Sch. of Med.*
K. COOPER. *Univ. of Calgary, Fac. Med.*

SYMPOSIUM: Systems Physiology and Aging
Co-Sponsored with Gerontological Society

THURSDAY AM

Chaired by: N. W. SHOCK, *NIA.*

9:00 Introduction. N. W. SHOCK
9:05 Cardiovascular Changes.
E. LAKATTA. *NIH.*
9:40 Renal Changes.
M. EPSTEIN. *Miami VA Hosp.*
10:15 Intermission
10:20 Pulmonary Changes.
J. L. MAUDERLY. *Lovelace Fndn.*
10:55 Neural Changes.
C. E. FINCH. *Ethel Percy Andrus Geront. Ctr., USC.*
11:30 Genetic Relation of Life-Span to Metabolic Rate for Five Mouse Strains and Their Hybrids.
G. A. SACHER, P. H. DUFFY, and E. F. STAFFELDT. *Argonne Natl. Lab., Argonne, IL.*
11:40 General Discussion.

GROUP FLIGHTS TO SPRING MEETING

Group space has been reserved on the following regular scheduled flights. All fares and schedules are current as of January 1, 1978 and are subject to change. If you have not made reservations and are interested, call Chevy Chase Travel (301) 657-3700.

	FROM	*TO*	*DATE*	*DEPART*	*ARRIVE*	
GROUP 1	Los Angeles	Philadelphia	Apr. 9	9:00AM	4:42PM	
	Philadelphia	Los Angeles	Apr. 14	6:00PM	8:27PM	
VIA TWA GROUP FARE: $270.00			Regular Fare $416.00			
GROUP 2	San Diego	Philadelphia	Apr. 9	7:30AM	4:02PM	
	Philadelphia	San Diego	Apr. 14	2:40PM	6:48PM	VIA Dallas
VIA AMERICAN GROUP FARE: $269.00			Regular Fare: $414.00			
GROUP 3	Dallas/Ft. Worth	Philadelphia	Apr. 9	12:45PM	4:36PM	
	Philadelphia	Dallas/Ft. Worth	Apr. 14	2:40PM	5:04PM	
VIA AMERICAN GROUP FARE: $168.00			Regular Fare: $258.00			
GROUP 4	Chicago	Philadelphia	Apr. 9	3:35PM	6:25PM	
	Philadelphia	Chicago	Apr. 14	4:05PM	5:21PM	
VIA UNITED GROUP FARE: $130.00			Regular Fare: $162.00			
GROUP 5	Minneapolis	Philadelphia	Apr. 9	4:55PM	8:10PM	
	Philadelphia	Minneapolis	Apr. 14	3:00PM	5:53PM	
VIA NORTHWEST GROUP FARE: $166.00			Regular Fare: $208.00			
GROUP 6	Detroit	Philadelphia	Apr. 9	2:20PM	3:34PM	
	Philadelphia	Detroit	Apr. 14	3:00PM	4:30PM	
VIA NORTHWEST GROUP FARE: $101.00			Regular Fare: $126.00			
GROUP 7	St. Louis	Philadelphia	Apr. 9	12:55PM	3:47PM	
	Philadelphia	St. Louis	Apr. 14	2:45PM	4:34PM	
VIA T.W.A. GROUP FARE: $147.00			Regular Fare: $184.00			
GROUP 8	Cleveland	Philadelphia	Apr. 9	4:10PM	5:18PM	
	Philadelphia	Cleveland	Apr. 14	4:30PM	5:47PM	
VIA NORTHWEST GROUP FARE: $86.00			Regular Fare: $108.00			
GROUP 9	Pittsburgh	Philadelphia	Apr. 9	4:00PM	4:59PM	
	Philadelphia	Pittsburgh	Apr. 14	2:30PM	3:30PM	
VIA ALLEGHENY GROUP FARE: $72.00			Regular Fare: $90.00			
GROUP 10	Boston	Philadelphia	Apr. 9	4:35PM	5:42PM	
	Philadelphia	Boston	Apr. 14	2:05PM	3:06PM	
VIA ALLEGHENY GROUP FARE: $74.00			Regular Fare: $92.00			
GROUP 11	Albany	Philadelphia	Apr. 9	3:55PM	4:50PM	
	Philadelphia	Albany	Apr. 14	2:27PM	3:19PM	
VIA ALLEGHENY GROUP FARE: $72.00			Regular Fare: $88.00			

COURSE IN DESIGN AND ANALYSIS OF SCIENTIFIC EXPERIMENTS

Massachusetts Institute of Technology will offer a two-week elementary course in Design and Analysis of Scientific Experiments, June 19 - June 30, 1978. Applications will be made to the physical, chemical, biological, medical, engineering, and industrial sciences, and to experimentation in psychology and economics. The course will be taught by Professors Harold Freeman and Paul Berger. Further particulars may be obtained by writing to the Director of the Summer Session, Room E19-356, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

FIRST ANNUAL AWARD FOR EXCELLENCE IN RENAL RESEARCH

This award is to be made in April at the Renal Dinner (FASEB) for the best paper or papers presented in the preceding Fall APS meetings.

The award will be presented to young investigators who have not yet achieved wide recognition for their work. It is not the purpose to honor senior or established investigators, but rather recognize and encourage workers who are beginning their scientific career. We will use four major criteria in assessing the papers. They are:

1. Does the paper present new information in an area in which data are lacking? This may be done by use of new methodology or a new or unique use of existing methods to present data which are of a type not currently available.

2. Does the paper present significant data which justifies rejection or acceptance of an hypothesis currently in contention?

3. Does the paper present evidence which justifies establishment of a new hypothesis?

4. Is the quality of presentation sufficiently good to merit an award?

With these four questions in mind the Award Committee will ask each chairperson and co-chairperson to nominate from zero to two individuals per session. In addition, we will ask them to give a brief summary of their reasons for that nomination. In poster sessions, three members of the Committee will evaluate the poster presentations and provide nominations and summaries in a similar fashion. All nominations will be mailed directly to Dr. Richard L. Malvin, University of Michigan.

Following the Fall Meeting, upon receipt of all nominations, including those from our Committee (one member will be present at each session) a decision will be made as to winner(s).

The present composition of the Committee which will make the award is:

Reiner Beeuwkes III – Harvard Medical School
Ernest C. Foulkes – University of Cincinnati
Franklyn G. Knox – Mayo Medical School
Richard L. Malvin, Chairman – University of Michigan
Sidney Solomon – University of New Mexico
Lawrence P. Sullivan – Kansas University Medical Center

Franklyn G. Knox, M.D., Ph.D.
Professor and Chairman

DISTURBANCES IN LIPID AND LIPOPROTEIN METABOLISM: NUMBER TWO IN THE CLINICAL PHYSIOLOGY SERIES

The second book in the Clinical Physiology Series* published by the American Physiological Society will be available in the Spring of 1978. This book entitled *Disturbances in Lipid and Lipoprotein Metabolism* has been ably edited by John M. Dietschy, Antonio M. Gotto, Jr., and Joseph A. Ontko. The preface is reprinted here to give you an introduction to its approach and contents.

"There has been considerable progress during the past few years in gaining a better understanding of many aspects of lipid metabolism. The mechanisms of lipid solubilization and transport in body fluids are now fairly well elucidated through a number of fundamental studies on the characteristics of lipid interactions with carriers such as bile acid micelles, albumin, and a variety of lipoproteins. The general principles governing the monomolecular movement of lipids across cell membranes have been developed and the importance of the cellular uptake of lipoproteins by endocytotic processes has been recognized. Other studies have delineated the mechanisms of regulation of many intracellular enzymatic pathways involved in both the oxidation of lipids as a major source of cellular energy and in the synthesis of more complex lipids and their assembly into various classes of lipoproteins. The information in this book is based on material presented at a Symposium on Lipoprotein and Lipid Metabolism sponsored by the American Physiological Society, and the chapters are divided into four groups.

> The first chapter discusses the general principles involved in determining the rates of movement of lipids, simple or complex, across biological membranes.
>
> The second group of chapters deals with the problem of lipid absorption in the intestine and describes the process of fatty acid and sterol esterification and chylomicron synthesis in the intestinal mucosa and the events that occur as the chylomicron is metabolized in the peripheral circulation.
>
> The third set of chapters covers the complex process of the synthesis of very-low-density, low-density, and high-density lipoproteins in the liver and describes the important regulatory roles for certain of these lipoproteins in peripheral tissues; abnormalities in the physiology of certain lipoprotein classes encountered in clinical disorders of lipid metabolism in man are also discussed.
>
> The final chapters deal with the release, binding, and metabolism of fatty acids both in the liver and in muscle tissue.

This book is intended to serve as a source of basic information in the field of lipid metabolism both for the investigator working in this area and for the clinician who must deal with disordered lipid physiology in patients."

Please take time at the Spring FASEB meeting to examine a copy of this new book at one of the lounges in the Exhibit Hall or at the Williams & Wilkins booth. Members of the Society may order a copy at a discounted price from one of the attendants in the lounges. A brochure and order form will be sent to members when the book is available.

*The first book in the series *Disturbances in Body Fluid Osmolality* edited by Thomas E. Andreoli, Jared J. Grantham, and Floyd C. Rector, Jr. is available from the Society Business Office, 9650 Rockville Pike, Bethesda, Maryland 20014. The price is $20 to APS members, a 20% discount.

PUBLICATIONS GROWTH

In 1977 the Society's journal and book publishing program served the scientific community well. Not only was there an increase in the number of journal articles published, but two new volumes of the *Handbook of Physiology (Reactions to Environmental Agents* and *Cellular Biology of Neurons)* and the first in a series on clinical physiology *(Disturbances in Body Fluid Osmolality)* appeared.

The accompanying tables clearly show the growth trend in recent years.

Table 1
Number of Journal Articles Published

	1977	1976	1975
AJP: Cell Physiology	56		
AJP: Endocrinology, Metabolism and Gastrointestinal Physiology	182		
AJP: Heart and Circulatory Physiology	214		
AJP: Regulatory, Integrative and Comparative Physiology	65		
AJP: Renal, Fluid and Electrolyte Physiology	162		
TOTAL AJP	679	564	574
JAP: Respiratory, Environmental and Exercise Physiology	332*	343	401
TOTAL AJP/JAP	1011	907	975
Journal of Neurophysiology	105	104	101
Physiological Reviews	15	20	18
GRAND TOTAL	1131	1031	1094

*Plus "Abstracts from Current Literature"

Table 2
Text Pages Published

Year	Journals	Books	Total
1977	9825	2262	12087
1976	8871	488	9359
1975	8439	1281	9720
1974	7488	1691	9179
1973	7262	2137	9399
1972	7040	731	7771
1971	7949	–	7949
1970	7230	–	7230

NEWS FROM CAPITOL HILL

B. A. Curtis, Chairman
Public Affairs Committee

During the middle of January I spent several days in Washington attending meetings at AAMC, FASEB Public Affairs Committee, and visiting with staff members on Capitol Hill. I learned of several developments of concern to APS members.

The Administration has included BRSG (old GRS) funds in the 1979 budget. As you recall these funds have been deleted for several years from the Administration Budget but have been restored by Congress. Your Society has maintained that these funds, while not large, are very important to the overall research effort because they are almost the only flexible funds available to the research community through their institutions. I am led to believe that Gilbert Omenn in the President's Science Advisors Office was instrumental in overcoming OMB objections. Those of you who know him might wish to drop him a note of appreciation.

Now for the bad news! Funds for training programs have not been increased but rather reduced in the Administration Budget. I have reason to think that our friends on Capitol Hill may restore these but this clearly marks the beginning of a long fight such as we had with GRS funds. As you know, training funds have been slowly eroding over the last few years. I urge you to write to your Senators and Representatives expressing your concern over the detrimental effects of such a cut upon the National Biomedical Research effort. Examples of how these funds have been used in the past in *your* institution will be very helpful. You might wish to take a straw pole of your departmental colleagues to determine how many of them received federal support for their pre and/or post doctoral training.

Do not be discouraged — mail does wonders. Mail from the scientific community is generally credited with forcing Senator Kennedy to withdraw his very restrictive DNA legislation.

Lastly I relay to you the advice from several staff members to look at the titles you give to your grants. They tell me that they get many requests for clarification of why such a weird title is being supported. They check into it at the funding agency and the facts show that the grant is very defensible. It is my impression that we have credibility on Capitol Hill. Their suggestion is to think of the public reaction and possible understanding when selecting a title. When the title is released upon funding and printed in local newspapers does it make any sense to the educated layperson? I urge you to try to help these laypersons try to understand what we are doing. There is an extra added benefit in trying to make titles more understandable — *Golden Fleace* awards from Senator Proxmire do not endear you to your funding agency.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE

The 29th Annual Session of the American Association for Laboratory Animal Science will be held September 24-29, 1978 at the New York Hilton Hotel, New York, N.Y. For further information contact: Mr. Joseph J. Garvey, Executive Secretary, AALAS, 2317 W. Jefferson St., Suite 208, Joliet, IL 60435.

RESPIRATION PHYSIOLOGY SECTION MEETING

An organization meeting of the proposed Respiration Physiology Section of APS will be held at the Federation Spring Meeting in Atlantic City. The meeting will be held on Monday, April 10 at 4:30 PM in Room G of Convention Hall. The Respiration Group Dinner will follow at 6:30 PM at the Howard Johnson Regency.

The meeting will seek to approve an organizational statement to be submitted to the APS Council as well as the nomination and election of officers. All interested APS members are invited to attend and participate.

The ad hoc Steering Committee for the proposed new section is composed of: Sami Said, Chairman; Lynne Reid, Chairman of this year's Respiration Dinner; and Norman Staub.

CAREERS IN THE LIFE SCIENCES SPECIAL ISSUES OF AMERICAN BIOLOGY TEACHER

The March and April 1978 issues of *American Biology Teacher* will be devoted to articles about careers in biology for High School and College Teachers and their students. There will be two 64-page issues: Part I will be published in March and Part II in April, 1978.

These special issues will include articles on: Teaching at the elementary, secondary and college levels; Opportunities in Marine Biology, Genetics and Genetic Counseling, Microbiology, Entomology, Agriculture; Combining Talents in Art and Biology, Writing and Biology; Health Careers, Outdoor Careers, Museum Careers, National Park Service Careers; Special Features on Matching Characteristics of People and Jobs, A Career Education Program, Fungibility, Technicians and Technologists, Handicapped Biologists, Women in Biology; and a Bibliography of Career Information, Review of Books and Audiovisuals on Careers.

The two parts may be received by remitting $3.50 to: National Association of Biology Teachers, 11250 Roger Bacon Drive, Reston, Virginia 22090.

DEUTSCHER SPORTÄRZTEBUND

(DEUTSCHE GESELLSCHAFT FÜR SPORTMEDIZIN) E. V.

26. Deutscher Sportärztekongreß

Bad Nauheim 26. 10. - 29. 10. 1978

Ausrichtung und Durchführung: Sportärzteverband Hessen e. V.

Wissenschaftl. Leitung: Prof. Dr. D. Böhmer, Prof. Dr. P. Nowacki

An die
Redaktion der Zeitschrift

""Journal of Applied Physiology"

Gießen, den 9.12.1977/sa

Betr.: Ankündigung des 26. Deutschen Sportärztekongresses in der Kongreßvorschau Ihrer Zeitschrift

Sehr geehrte Herren!

Ich würde mich sehr freuen, wenn der 26. Deutsche Sportärztekongreß in der Kongreßvorschau Ihrer Zeitschrift aufgenommen werden könnte.

Tagungsthema: "Sportmedizin - Aufgaben und Bedeutung für den Menschen unserer Zeit".

Schwerpunktthemen:

1. Biochemie, Physiologie und Pathologie der Skelettmuskulatur in ihrer Anpassung und Reaktion auf sportliche Belastungen.
2. Präventive Sportmedizin.
3. Rehabilitive Sportmedizin.
4. Kurative Sportmedizin (Sporttraumatologie).
5. Behindertensport.
6. Sportphysiotherapie.
7. Hochleistungstraining.
8. Fortschritte der internationalen Sportmedizin.

Vortragsanmeldung: Bis 1.4.1978.

Auskunft: Prof. Dr. med. Paul E. Nowacki, Sportmedizinisches Forschungs- und Untersuchungszentrum der Justus Liebig-Universität, Kugelberg 62, 6300 Gießen, Tel.-Nr. 0641/7025322.

Mit bestem Dank und freundlichen Grüßen

Ihr

P. Nowacki

Prof. Dr. med. Paul E. Nowacki

INSTRUCTIONS FOR APPLYING FOR APS MEMBERSHIP

At the April 1977 business meeting the proposed Bylaws Amendment for creating a new membership category for Students was passed. This Bylaw Amendment appears under Section 7 of Article III of the Constitution, printed below.

CURRENT APPLICATION FORMS

Published in each issue, the Physiologist shall routinely carry one copy of the current application form (following). This form will serve for all categories of membership. Any member desiring to sponsor more than one applicant may use a Xerox copy of this form. Any application submitted on an out-dated form will be returned to the sponsor to be redone on the acceptable form.

One application form serves all membership categories. There are, however, specific sets of instructions for each category. Therefore it is essential that sponsors and applicants carefully attend to those instructions specific to their desired category.

GENERAL INSTRUCTIONS

FOR ALL CATEGORIES:

Use only the current application form. Check the box indicating the category of membership for which you are applying. Use the SPECIAL INSTRUCTIONS for that category when filling out the form. Type the Application. Fill out all applicable spaces. Only completed applications will be reviewed.

The Bibliography must be submitted in the form found in the Society's journals. An example of the correct form is:

JONES, A.B., and C.D. Smith. Effect of organic ions on the neuromuscular junction in the frog. Am. J. Physiol. 220:110, 1970.

Send no reprints.

Deadline Dates: Completed applications received between February 1 and July 1 are considered for nomination by the Council at the Fall Meeting. Applications received between July 1 and February 1 are considered for nomination by the Council at the Spring Meeting. Applications are not complete until all materials, including sponsor's letters, are received.

QUALIFICATIONS (Except Students):

The Membership Advisory Committee uses the following 5 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, or are responsible for physiology in another department. Relatively high ratings are given to people with 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 activities as a teacher including production of educational materials, and (3) special awards or other recognition the applicant has received for outstanding teaching effectiveness.
5. 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, interest 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 the selected category of membership in this Society with prospective applicants.

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

CHECK LIST:

1. Original copy of application signed by both sponsors.
2. Application on a current form, including the bibliography (1 original and 7 copies).
3. Mail the original, which has been signed by the two sponsors, plus 7 copies to:

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

SPECIAL INFORMATION AND INSTRUCTIONS

FOR REGULAR MEMBERSHIP

Bylaws of the Society:

Article III, Section 2 - Regular Members. Any person who had 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.

IF ALIEN: Please attach a letter and 7 copies stating visa status and type of passport and giving evidence of intent to stay in North America.

Duties and Privileges:

1. Hold Elective Office.
2. Vote at Society Meetings.
3. Serve on Committees, Boards and task forces.
4. Serve on Federation Boards and Committees.
5. Sponsor New Members.
6. Orally present or co-author a contributed paper and sponsor a non-member authored paper at the Fall scientific meeting.
7. Orally present or co-author one contributed scientific paper at the annual Federation meeting or sponsor one paper.
8. Receive the Society publications, The Physiologist and The Physiology Teacher.
9. Receive Federation Proceedings.
10. Subscribe to handbooks and periodicals published by the Society at membership rates.
11. Register to attend scientific meetings of the Federation and the APS Fall meeting at membership rates.
12. Participate in FASEB Member's Life Insurance Program, Disability Program and in Hospital Protection Plan. (For Residents of the United States, its territories or possessions).
13. Eligible to receive the Daggs Award.
14. Eligible to be selected as Bowditch Lecturer (members under 40 years of age).

FOR CORRESPONDING MEMBERSHIP

Bylaws of the Society:

Article III, Section 3 - Corresponding Members. Any person who has conducted and published meritorious research in physiology, who is presently engaged in physiological work and who resides outside of North America shall be eligible for proposal for corresponding membership in the Society.

Duties and Privileges:

1. Serve on Society Committees, Boards and Task Forces.
2. Serve as one sponsor of new Corresponding Members (One regular member must be sponsor of a new Corresponding Member).
3. Orally present or co-author a contributed paper and sponsor a non-member authored paper at the Fall scientific meeting.
4. Orally present or co-author one contributed scientific paper at the annual Federation meeting or sponsor one paper.
5. Receive the Society publications, The Physiologist and The Physiology Teacher.
6. Receive Federation Proceedings.
7. Subscribe to handbooks and periodicals published by the Society at membership rates.
8. Register to attend scientific meetings of the Federation and the APS Fall meeting at member rates.

FOR ASSOCIATE MEMBERSHIP

Bylaws of the Society:

Article III, Section 5 - Associate Members. Persons who are engaged in research in physiology or related fields and/or teaching physiology shall be eligible for proposal for associate membership in the Society provided they are residents of North America. Associate members may later be proposed for regular membership.

Duties and Privileges:

Same as for Regular Members except for the privilege of:

1. Holding Executive Office, or membership on certain committees.
2. Voting at Society Meetings.
3. Sponsoring New Members.
4. Receiving the Daggs Award.
5. Selection as Bowditch Lecturer.

FOR STUDENT MEMBERSHIP

Not all questions on the application form may be appropriate – Please place NA next to any such question.

Bylaws of the Society:

Article III, Section 7 - Student Members. Graduate students in physiology who have completed their preliminary examinations for the doctoral degree provided they are residents of North America. No individual may remain in this category for more than five years.

Duties and Privileges:

1. Present one contributed paper at the Fall Scientific meeting with the endorsement of the student's advisor.
2. Receive the Society publications, The Physiologist and The Physiology Teacher.
3. Subscribe to Handbooks and Periodicals at member rates.
4. Register to attend scientific meetings of the Federation and the APS Fall meeting at student rates.

This Form is Valid Only for 1978

APPLICANT'S LAST NAME _____

Date _____

THE AMERICAN PHYSIOLOGICAL SOCIETY

9650 Rockville Pike, Bethesda, MD 20014

MEMBERSHIP APPLICATION FOR:

- ☐ REGULAR
- ☐ CORRESPONDING
- ☐ ASSOCIATE
- ☐ STUDENT

CURRENT MEMBERSHIP CATEGORY; YEAR ELECTED _____

See Instructions

Name of Applicant: _____
First Middle Last

Mailing Address _____ Birth Date: _____

_____ Citizenship: _____

_____ Country of Permanent Residence: _____

_____ Telephone No.: _____
Zip Code

1. **EDUCATIONAL HISTORY** (Predoctoral students indicate date preliminary examination was passed.)

Dates	Degree	Institution	Major Field	Advisor

Doctoral Dissertation Title: (if any)

Postdoctoral Research Topic:

2. **OCCUPATIONAL HISTORY**

Present Position:

Prior Positions:

Dates	Title	Institution	Department	Supervisor

SPONSORS

#1. Name: _____

Mailing Address: _____

_____

_____

_____

Telephone No. Zip Code

#2. Name: _____

Mailing Address: _____

_____

_____

_____

Telephone No. Zip Code

I have read the guidelines for applicants and sponsors and this application and attest that the applicant is qualified for membership.

#1 Signature _____ #2 Signature _____

Each sponsor must submit an original and 7 copies of a confidential letter of recommendation to the Society, under separate cover.

This Form is Valid Only for 1978

APPLICANT'S LAST NAME _____

Date _____

THE AMERICAN PHYSIOLOGICAL SOCIETY

9650 Rockville Pike, Bethesda, MD 20014

MEMBERSHIP APPLICATION FOR:

- REGULAR ☐
- CORRESPONDING ☐
- ASSOCIATE ☐
- STUDENT ☐

CURRENT MEMBERSHIP CATEGORY; YEAR ELECTED _____

See Instructions

Name of Applicant: _____
First Middle Last

Mailing Address _____ Birth Date: _____

Citizenship: _____

Country of Permanent Residence: _____

Telephone No.: _____

Zip Code

1. **EDUCATIONAL HISTORY** (Predoctoral students indicate date preliminary examination was passed.)

Dates	Degree	Institution	Major Field	Advisor

Doctoral Dissertation Title: (if any)

Postdoctoral Research Topic:

2. **OCCUPATIONAL HISTORY**

Present Position:

Prior Positions:

Dates	Title	Institution	Department	Supervisor

SPONSORS

#1. Name: _____

Mailing Address: _____

Telephone No. Zip Code

#2. Name: _____

Mailing Address: _____

Telephone No. Zip Code

I have read the guidelines for applicants and sponsors and this application and attest that the applicant is qualified for membership.

#1 Signature _____ #2 Signature _____

Each sponsor must submit an original and 7 copies of a confidential letter of recommendation to the Society, under separate cover.

COUNCIL OF ACADEMIC SOCIETIES BRIEF

ASSOCIATION OF AMERICAN MEDICAL COLLEGES • 1 DUPONT CIRCLE NW • WASHINGTON DC
(202) 466-5100 WINTER, 1978 VOL. 3, NO. 2

CAS MEETS ON BIOMEDICAL RESEARCH POLICY. Representatives of over 40 of the Council of Academic Societies member organizations met at AAMC headquarters in January to consider the draft report of AAMC's Biomedical Research and Research Training Task Force. Prepared by the task force, under the leadership of CAS Chairman Robert M. Berne, M.D., Chairman of Physiology at the University of Virginia, the draft received the general support of the CAS representatives in the day-long discussion of the 21 policy recommendations made in the 22-paged document. Major issues addressed in the paper were

- Support of basic, applied and targeted research;
- Maintenance of a broad base of undifferentiated research;
- Support of applied research;
- Targeted research and the promotion of knowledge transfer;
- Training of research personnel;
- Changes in the management of federal research support;
- Strengthening the institutions which perform research;
- Supporting the peer review system;
- Assuring public participation and accountability; and
- Intrusion of the federal presence into academic institutions.

Members of the AAMC task force will now prepare a final revision, incorporating new suggestions from the session. The revised draft will then go before the AAMC Councils in March. If it is adopted then, the document should be available for distribution in late March. The final policy will guide the AAMC in the preparation of public statements and testimony.

For further information, contact Thomas E. Morgan, M.D., Director, Division of Biomedical Research, AAMC.

MEDICAL SCHOOL APPLICANTS DECREASING. For the first time since 1966, a significant downturn in the number of people applying to medical school has been seen by AAMC's application processing service. The American Medical Colleges Application Service (AMCAS), which is utilized by about 90% of all applicants, has processed 10.4% fewer applicants this year than at this time last year and 12.3% fewer than in the peak year 1975-76. With essentially all applicants now logged in, AMCAS has processed 3,839 fewer individuals than were processed at the same time in 1977. Reasons for this drop are being explored.

FMG TIDE EBBS. The new exchange visitor (J-visa) requirements for alien FMGs went into effect January 10, 1978. FMGs seeking to enter programs of graduate medical education as exchange visitors now must have passed the new Visa Qualifying Exam (VQE) and an English fluency exam before they can be issued a visa permitting them to enter the country for two years as exchange visitors.

Waivers. A waiver provision permits programs in which an abrupt drop in FMG availability would substantially disrupt medical services to recruit FMGs who have not passed the VQE. Proposed regulations are being developed by the Health Resources Administration which will limit access to opportunities for substantial disruption waivers to programs situated in physician shortage areas and to some specialties which have had a high national proportion of FMG residents. Even under the waiver, programs will not be able to enroll as many FMGs as previously, and the proposed formulae will tend to phase out unqualified FMG entrants by 1980.

Special reviews. Meanwhile, the Liaison Committee on Graduate Medical Education is planning to make special reviews of graduate educational programs which claim that a reduction in alien FMG entrants will disrupt their service functions.

There is a decline in the number of alien FMGs seeking ECFMG certification and, of the 4,618 who took the VQE in September 1977, only 1,163 (25%) passed. It appears that the era of massive influx of FMGs into programs of graduate medical education in the United States is ending.

For further information, contact August G. Swanson, M.D., Director for Academic Affairs, AAMC.

RESEARCH AWARDS TAXABILITY. AAMC continues its efforts to counter the September 6, 1977, Internal Revenue Service ruling that the entire amount of National Research Service Award (NRSA) research training stipends retroactive to 1974 is taxable. The IRS ruling applies only to taxes on research training awards made under the NRSA Act by NIH and ADAMHA and not to awards made under other authorities or by private agencies. Hopes are high that legislation to retain the previous exclusion of up to $300 per month for a maximum of 36 months will be enacted before April 15, 1978.

Information to provide some guidance for the managers of training programs in advising their research trainees was distributed to CAS official representatives as AAMC Memorandum #78-5 on January 25, 1978, and is available to others upon request.

Contact Thomas E. Morgan, M.D., Director, Division of Biomedical Research, AAMC.

TENTH BIRTHDAY. The fall 1977 Annual Meeting of the CAS marked the 10th year since 16 societies were invited by AAMC to found the CAS. With the election to membership of three societies by the AAMC's legislative body, the Assembly, on November 8, 1977, the CAS membership rose to 63 academic and scientific organizations whose membership totals an estimated 100,000 individuals.

For information on the CAS and how it relates to AAMC programs, contact Mary H. Littlemeyer, Editor, CAS Brief.

The CAS Brief is prepared by the staff of the AAMC's Council of Academic Societies and is distributed through the auspices of your member society.

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PHYSIOLOGICAL PROGRESS

WILLIAM C. GIBSON
M.D., F.A.C.P., F.R.C.P.
INTERNATIONAL EDITOR

One of the pioneer biomedical societies of the world last year celebrated its first hundred years of usefulness to humanity. Amid the ancient cloisters and gardens of Cambridge University, the members of the Physiological Society of Great Britain gathered in unusual numbers to hear papers and to witness demonstrations epitomizing the progress that has been made in this subject over the past century.

Few other disciplines have so changed in this period as has physiology, especially in the United Kingdom. Anatomy, a century ago, could be said to be well established, but only a few individuals were carrying on work in the physiological field. Their predecessors—William Harvey, Thomas Willis, Christopher Wren, Robert Lower, John Mayow, Stephen Hales, Charles Bell, and more recently Marshall Hall and William Bowman—were outstanding, but though they were bright stars in the firmament they did not leave behind them any continuing schools.

During the centenary of the prestigious Physiological Society of Great Britain, distinguished scientists gathered together and reviewed the progress made during the past 100 years. They paid tribute to such members past and present as the 1932 Nobel laureate Sir Charles Sherrington, right, and the 1963 Nobel laureate Sir John Eccles, left.

One of the factors militating against physiological studies in Britain was the anti-vivisectionist movement, which had imported fuel for its fire from across the Channel. The militants in this movement were indefatigable campaigners and they were all well versed in Magendie's methods of dealing with his experimental animals. An English physician who had assisted in Claude Bernard's laboratory wrote to the press in London, detailing the "cruelty" he had witnessed, and the public was led to believe that this sort of thing happened wherever medical researchers were to be found.

On the other hand, an important factor in promoting the formation of a "fraternity" or "brotherhood" of physiologists, to use Sherrington's terms, was the feeling—in fact the realization—by some of the brighter students of medical science in Great Britain that Germany was far in advance in the pre-clinical sciences.

With the same grit and determination shown by later generations of Britons in World War II, the small band of men who called themselves physiologists struck a blow for freedom in 1876. They reacted to the restrictive Cruelty to Animals Act of that year by founding not only the Physiological Society, but also the Association for the Advancement of Medicine by Research, the forerunner of the Research Defence Society of 1917.

The Physiological Society has no president and no headquarters building. It is dependent upon the interest in physiology of its members, who carry out, in voluntary fashion, the arrangements for the Society's peripatetic meetings. These meetings have become almost too popular due to the mass movement toward physiology today, and attendance has had to be kept to members and a limited number of

guests. The meetings are excellently organized, with time for papers and time to inspect demonstrations of new techniques or instrumentation. The members dine together, and the intimate feeling of a century ago remains remarkably strong. Heated discussions are relieved by humorous sallies at the expense of the too earnest partisans, although I used to wonder if I would escape uninjured as I sat between G. Lindor Brown and John C. Eccles when they crossed swords over the nature of synaptic transmission.

Through the years 1927 to 1938, the benevolent Henry Dale, irreverently called "The Pope" by some of the younger members, loved to send out to pairs of "adversaries" the latest tidbits of information that came to him as director of nearly everything in medical research in Great Britain. Toward foreign scientists, often refugees from Nazi Germany, he exercised the greatest generosity. When he and Otto Loewi of Graz were jointly awarded the Nobel Prize in 1936, the Nazis confiscated Loewi's half, but Sir Henry arranged for Loewi to come to England, and on his arrival presented him at the railway station with *his* half of the prize.

The incredible nonagenarian Archibald V. Hill, himself a Nobel laureate for his work on the workings of muscle, still recalls the happy association with members of the Physiological Society as they labored together on the Academic Assistance Council to bring foreign members of the Society to a safe haven in Britain prior to and during World War II. Hill had that remarkable ability —vouchsafed to only certain researchers—to reach out to other disciplines for the good of the country. His early association with the father of radar, Robert Watson-Watt, produced almost magical results in the detection of enemy aircraft in the Battle of Britain. Happily, his son, David Keynes Hill, F.R.S., carries on the tradition of scientific excellence in the new Jerry Lewis Muscle Research Centre at the Royal Postgraduate Medical School at Hammersmith Hospital in London.

When the Physiological Society was only one year old, the dean of Cambridge University physiologists, Michael Foster, wrote to Professor Henry P. Bowditch at Harvard, proposing that they jointly establish a physiological journal. Thus, the *Journal of Physiology* had three British and three American editors; this lasted until 1898, when the *American Journal of Physiology* commenced publication. The halcyon days of Sherrington's chairmanship of the editorial board of the *Journal of Physiology*—for nine years, ending in 1935—saw the projected two volumes per year moving rapidly to three and then four volumes annually. The prestige of the publication depended on its high quality. The rejection rate for papers submitted to the unpaid editorial board of 30 members has increased steadily to the present rate of 33 percent.

From the vantage point of today, one wonders what the handful of original members of the Society would think of the juggernaut that they launched more than one hundred years ago. A large, prestigious society and its journal, built on high quality communications, have clearly justified their wildest hopes.

Dr. Hermann Rahn, who attended the 100th Anniversary of The Physiological Society, suggested the publication of this article.

Attention is called to the book in which the six major addresses given at the Centenary are published: *The Pursuit of Nature: Informal Essays on the History of Physiology*. Hodgkin, A.L., A.F. Huxley, W. Feldberg, W.A.H. Rushton, R.A. Gregory, and R.A. McCance. New York: Cambridge Univ. Press, 1977.

Also of interest is an article by W. Bynum which appeared in Vol. 263 of *The Journal of Physiology*, "A Short History of The Physiological Society," that reviews the last 50 years of their Society's doings.

NEWS FROM SENIOR PHYSIOLOGISTS

Lawrence Bennett to Hy Mayerson:

I appreciate your personal note and particularly all you are doing to maintain communication with Senior Members. Helen and I have spent considerable time this summer in the hospital with major surgery. I had a triple bypass with a couple "skips." Fortunately, we have come through with flying colors. My treadmill this week said "active normal." Now I had better live up to it. We plan to pull the Airstream down to Mesa again for the winter and finish recuperating in the sun.

Walter Fleischmann to Bruce Dill:

I thank you very much for your kind letter and the most interesting reprints. I was most interested in your recollections of Professor Henderson and to your references to Bayliss "Principles of General Physiology." I bought a copy of this book in 1925 and still read it occasionally. I hope this letter finds you in good health. I do not worry about aging either – as you say there is not much you can do about it. With kindest regards.

Joseph Hughes to Hy:

I continue in full time, private practice of Psychiatry and I am Senior Consultant in Psychiatry to the Pennsylvania Hospital, Philadelphia. I do not plan to retire in the foreseeable future as I feel very rewarded by my responsibilities to the Institute of the Pennsylvania Hospital and to my patients. I have four sons who are physicians and have completed their specialty boards. With best personal regards.

Nathan Rakieten to Hy:

Thank you for your inquiry about my welfare in your "Senior Citizens" note. It was nice to hear that you are well and enjoying your well deserved "retirement".

You are right I am still on the "firing line" working five and a half days a week doing mainly clinical pathology and some toxicology. In spite of this I am a "retiree" from the Society and from most of my other Scientific affiliations. I try to keep up with the new advances in the basic sciences and Medicine but my pile of Journals and abstracts grow higher and higher.

Ella and I, the children and grandchildren – nine – are well and are active in Community Affairs as well as trips to the City for music and plays. Our golf games are still fun but our handicaps don't come down.

At the moment I am not interested in moving but one can't rule this out as a possibility in the future.

Milton Mendlowitz to Hy:

I am still practicing medicine and engaged in writing, teaching and peripheral research activity at the Mount Sinai School of Medicine. I received an oblique offer to coordinate the Hypertension Programs of NIH which I might have considered if the challenge and conditions were interesting to me. Since it was eventually decided to leave the chaotic status unchanged lest some of the younger people might feel threatened (the farthest thought from my mind), the offer was withdrawn.

I might consider a change in my present status. The change, however, would have to be challenging in terms of both research, teaching and administration. On December 30, 1977, I shall be 71 years old.

Lena A. Lewis to Hy:

It is always surprising to read the varied activities of our senior members. I will have no such great variation from my previous activities to report. Since reaching the age of retirement at the Cleveland Clinic, with a very nice program now in effect, I have continued working on a half-time basis as a consultant in the Divisions of Clinical Chemistry and Research. I am still involved in studies of lipoproteins and physiological factors regulating them. I enjoy traveling and manage to see some of my physiologist friends on some of my trips which makes them especially pleasant. Best wishes to all.

Sam Reynolds to Hy:

Your cordial annual letter is very nice to receive. It shows that, after a full and productive career, you have fallen into a pattern of daily life that encourages you to enjoy each day without the necessity to write, produce, and go through the motions of an active and younger man, woman or person scrambling up the academic ladder. You have not allowed living oblivion to set in, but in positions of trust and responsibility, "beyond retirement" at Touro and now on the Board of Trustees at Dominican College, you still find pleasure in your home and garden.

The urge in most of us at first, is to act and make noises as when we were younger men. No more! This year I gave a set of publications, curriculum vitae and other things from a life-time of work to the library at Swarthmore College at their request. Some papers and books were barnacle-encrusted or misshapen but of some 250 papers I hope a few will hold up to the scrutiny of the future. I gave other items to labs and workers where, hopefully, they can serve a purpose. After 8 years of retirement in Lancaster, I discovered a lot of – what did Caesar's soldiers carry – implements? I shuck it all, well nearly all, with 3 papers still coming out and one to do, if I get to it. We moved over here to Pine Run where everything needed is provided. For many reasons it suits us fine. There are about 300 members, interesting and fine people from all over – a 200-bed Health Care Center, 3 M.D.'s, consultants, a fine hospital and the other services that go with it. Best regards.

Ed Van Liere to Bruce:

Thank you for your note. I celebrated my 82nd birthday last Sunday. Have been in West Virginia for many years although I was born in Kenosha, Wisconsin and attended the state University. It took me a long time to learn to like the hills of West Virginia. Southern Wisconsin is a beautiful land, but I would no longer care to live there during the winter months.

I came from a large family and was the youngest of 12 children. Two of us are still living. My sister is 87 so this gives me a mark to shoot at.

I am familiar with many parts of Pennsylvania – it is a great state. Morgantown is about 70 miles from Pittsburgh and a fine road lies between the two cities. We go there often to do some shopping or go to the theater. The Mellon Bank is as you perhaps know rather famous. The University of Pittsburgh is a good school and generally has a terrific football team.

Our Medical Center continues to grow as does the entire University. At the present time we have about 22,000 students enrolled in the University; 1200 of these are enrolled in the Medical Center which includes of course, pharmacy, nursing, dental, etc.

Harold M. Kaplan to Hallowell Davis:

I have no words of wisdom to pass on to younger colleagues since everyone seems hell-bent on repeating history on his own. I retired September 1, 1977, but this lasted one weekend. I was at once drafted to assume the Acting Directorship

of our central animal quarters, the position having been vacated at exactly the right time. What with nature abhorring a vacuum, the administration would have had to immediately invent a Director which I guess explains the whole thing. The story gets complicated. I have also accepted an invitation to continue at the Medical School here, partly in Respiration and partly as Coordinator of the Cardiovascular aspect of Physiology for first year medical students. Looking it all over, I had an easier time when I was just a full professor.

Howard Burchell to Hy:

Thank you for the letter with greetings from the emeritus group of APS. I am planning to return to Stanford for the winter quarter and I will have a couple of months of teaching at the University of Arizona prior to that time. I continue to gather material and arrange my thoughts regarding the basic science underpinnings for development in clinical medicine, and have had some interesting discussions with Julius Comroe. I had thought of spending fulltime on the topic this next winter, but have been diverted to the teaching and consultation role, with which I guess I am more comfortable. I shall continue to do some work upon historical aspects of disease and like many shall have a talk on Harvey (400th birthday) to give.

Samuel E. Pond to Hy:

I was born in Woonsocket, R.I. on March 27, 1890. My doctorate was in general physiology at Clark University in Worcester, MA in 1921. I went to Cleveland and taught at Western Reserve University with research in biophysics. Summers were spent at MBL, Woods Hole to 1941 with research in calcification and ossification. Teaching and research continued to 1970 ending formally with Emeritus in biology at the University of Hartford, administrative activities to 1973, then retirement in Maine.

Here in rural, central Maine, I'm now quite out of formal teaching. We sold our Connecticut property in 1973 and came to Winthrop, Maine to finish modernization of a lakeside camp. The central portion of the camp is of old construction, back in the 1780's. Solar heat is somewhat of an innovation serving the fall, winter and spring months only; hardwood trees with foliage tend to keep us cooler in summer. We're at the north side of a large lake.

I've gone along with the 1973 formation of the Cobbosseecontee Watershed District, and the Southern Kennebec Valley Planning District to handle problems of varied septic systems, anti-pollution and lake-water testing to reduce hazards and contamination of the lake contents. We've had several groups of summer biologists and chemists working with us, assisted by federal and state appropriations. So my biological and physiological training have been put to good use. Five educational institutions encircle us here (Bates, Bowdoin, Colby, Thomas and University of Maine – Augusta). There is intense interest in the side-effects of the dairy industry (farms which neglect to handle manure economically). Our communities are planning to furnish storage bins for winter handling of this "fertilizer" which otherwise pollutes the nearby lakes by runoff and waste. In addition I've had the fun of organizing and contributing to editing and distribution of newsletters for the people of the countryside with Yacht Club and Lake Association assistance. Plant, animal and human physiology have a place however in the community activities here. It is field-work that helps rather than laboratory instrumentation. But me and my neighbors get along pretty well with stringent living. Best wishes to APS and all it means.

Richard J. Bing to Hy:

I was interested in your comments about encountering your old students in your present position. If I include the students who have trained in my division at Hopkins, P & S, Alabama, I find that many of them are in positions of much greater glamour than me. There is a University President, also Professors of Medicine and Surgery and so on. Several of my old students also have done well, but I have learned that a good man will amount to something regardless of the teachers he has. The teachers can only inspire and not create a good man.

I am still working very hard in both clinical and experimental medicine and I am grateful for that. As far as my research is concerned, I have learned that things repeat themselves as far as one's experiences with the official scientific communities are concerned; new ideas are difficult to get accepted, let alone published. I enjoy writing music and have had some moderate successes. It is wonderful of the Society to pay attention to what the old folks are doing. It is certainly encouraging and heartwarming.

Arthur Grollman to Hy:

Thank you for your kind note. I am still working full-time and enjoying my labors. Having reached the age when the rules of the University of Texas demand that one retire, I am at present serving as Professor of Medicine at the College of Community Health Sciences of the University of Alabama. This newly created branch of the University offers a three-year program of post-graduate residency, teaches about 36 third and fourth year medical students, maintains a large out-patient clinic, supervises the care of about 20 to 30 hospitalized patients, and performs other functions concerned in Community Health programs. I serve primarily as an attending physician at the hospital, seeing patients in the clinic, teaching the resident physicians and students, interpreting electrocardiograms, acting as a consultant at the local VA Hospital, etc. So you see I don't have time to play golf, go fishing, jog or indulge in the other prerogatives of retirement. I have two scientific papers in press dealing with 1) the reason for the high incidence of hypertension in the black and 2) the inotropic action of drugs on the isolated auricle of the normotensive and hypertensive rat.

Yes, I am free to move on to another area. I have no words of wisdom to pass on to my younger colleagues. I do believe that Sigmund Freud was right in his view that work is an essential part of life and now that color of one's skin, sex, mental incompetence, etc. cannot be discriminated against in employment, one's chronological age ought to be added to the list. Congress apparently is considering the matter, but since teachers constitute a negligible percent of voters as compared to Labor Unions who oppose this proposed legislation directed to correct this inequity, it will undoubtedly be buried in committee. I am delighted to know that you are in good health and enjoying yourself. Thank you for your interest.

C. W. Shilling to Hy:

Those of you who know my background, know that I served in the Navy for 27 years, retired at my own request, went to the Atomic Energy Commission for 5 years, requested retirement under civil service there, and went to The George Washington University Medical School, where I headed the Biological Sciences Communications Project for 12 years. This was a medical information processing group which I developed.

When I got too old for The George Washington University, I came to my present job as Executive Secretary of the Under-

sea Medical Society. This is a group of 1300 members, representing 17 nations, who are interested in the health, well-being and efficiency of divers of all types – sport, SCUBA, University, deep sea, search for oil. This is another full time job which I'm enjoying greatly. Please give my best regards to Bruce Dill, Maurice Visscher, and Hallowell Davis. I think all three will remember me. I know Hallowell Davis will.

G. Clinton Knowlton to Maurice Visscher:

All goes well with me. I had a stroke ten years ago. I had partial sensory paralysis on my right side. I have a wife; one son, a civil engineer; five grandsons; two granddaughters; and a great granddaughter. I enjoy *The Physiologist* very much.

Robert Gaunt to Maurice:

Thank you for your inquiry. My wife, Jo, and I have made for us a big break since I last heard from you. After shivering in New Jersey last winter, we sold out and contracted to build a new house in Clearwater, Florida which we think will be highly satisfactory to us. My professional ties in New Jersey are now ended and I will try to settle down here and proceed with writing and "historicalizing" commitments. The trouble is that we left New Jersey at the end of June and our new home is still unfinished. We have comfortable quarters but living from suitcases, with no typewriter or reference materials, cramps one's style a bit. Bill and Phyllis Parkins and Warren Nelson's widow, Patty, are helpful and pleasant neighbors. With best wishes to you.

Hans Selye to Maurice:

In reply to your inquiry, let me say that I have retired to emeritus status at the University of Montreal but immediately after that I founded the International Institute of Stress which is a non-profit organization with affiliations in many countries. I am still actively engaged in research on stress and I am also writing various books on the subject. For example, I recently published a revised second edition of "The Stress of Life" (1976) under the McGraw Hill imprint, and an encyclopedic treatise, "Stress in Health and Disease," was put out by Butterworths, also in 1976. I am now working on my memoirs and have assumed an editorship of an annual series, tentatively entitled "Selye's Guide to Stress Research" (Van Nostrand Reinhold). Being a "roaming ambassador" for the stress concept throughout the world keeps me sufficiently occupied and, hence, I am unable to take on another post. If you feel that any of my senior colleagues in the Society would be interested in joining our Institute (preferably one or two who have some knowledge of stress and could apply its rules to human behavior), I think we might possibly work out the basis for a mutually satisfactory collaboration in one of our centers in Canada or in the United States.

I had some "words of wisdom to pass on to our younger colleagues" and I put them in my book, "From Dream to Discovery." I tried to summarize all those things I thought would have been of great use to me if I had known about them at the beginning of my career. This book may be obtained either in hardcover through Arno Press for $24.00 or in a special quality paperback edition distributed through our Institute for $10.00.

At present, I am especially elated by the fact that one of my former graduate students, who obtained his Ph.D. in this department, Dr. Roger Guillemin, has just become a co-recipient of the Nobel Prize.

Charles D. Kochakian to Maurice:

I am responding to your letter concerning "Senior Members." I will not reach our University's retirement period until June 30, 1979. I expect to continue my current activities until then and possibly beyond. I spend most of my time in the laboratories exploring new areas in the mechanism of the anabolic action of androgens. I have been attending and presenting papers at national and international meetings. I am now trying to crystallize plans for the post-retirement years. My present thoughts are to continue my research activities and writing but this will depend on funding and permission to utilize my current laboratory facilities. I am open to other opportunities.

The volume "Anabolic-Androgenic Steroids," which I edited, came off the press in December 1976 and has been well received. I am preparing a final report of the summer student research program for high school seniors and college undergraduates which I initiated and directed from 1960 to 1970. In the eleven year period, opportunities to work in research laboratories at the Medical Center were provided for 228 students. Replies to the letter of inquiry are very exciting. It is thrilling to learn of the achievements of these young people and the influence the program had in their career development. I am still very interested in young people and to help them develop their inherent talents, but continue to have no tolerance for laziness or incompetence. I have not seen anything yet that will replace hard work, dedication and intelligence. Legislation and large grants-in-aid are not the cure-all to our many problems.

Society poet **Carl A. Dragstedt** submitted the following to Maurice:

EIGHTY-TWO

How does it feel
To be eighty-two?
It feels quite a bit
Like a worn out shoe;
The outside is wrinkled,
And weathered, and dusty,
The inside is leaky,
And achy, and rusty.
But the outside and inside
Don't make up the whole,
One has to inquire –
How are things with the sole? (sp.?)

WATER

The water on this planet
Always stays the same,
But comes and goes in many ways –
A fascinating game.
It comes to earth from clouds above,
In hail, or snow, or rain,
And then it all evaporates
So it can come again.
We see it for a little while
As raindrops in the sky,
And then we may confront it as
Some tears in a maid's eye.
It takes a turn as beads of sweat
On some worker's brow,
And as a wave that inundates
An overloaded scow.
It plays a role as juice in fruits,
And in our lymph and blood,
An iceberg has a lot of it,
But so does simple mud.
Yet it has many roles to play,
And is great to quench one's thirst,
But sometimes it is good to have
A little whiskey first.

Alberto Hurtado to Hy:

In 1971, at the age of 70, and after completing my six years term as Rector of the Universidad Peruana Cayetano Heredia, I retired from all teaching and administrative duties.

At the present time I am fully devoted to the preparation of a Monograph which will attempt to summarize, and present in a coordinated way, the active research carried out in Peru during the last 50 years in regards to the influence of a high altitude environment on man. The title of the book will be "Man and Altitude," and will be published in the USA through a grant extended by the NIH. The data corresponds to various levels of altitude, but mostly to Morococha, an Andean town of about 8,000 native inhabitants, located at 4,540 meters (14,900 feet). The subjects have been investigated at rest and during physical activity, and the results compared to those obtained in Lima, at sea level.

After several decades of work in this field, it is my opinion that high altitude research offers an excellent opportunity to appreciate how the human body, by means of a harmonious integration of many adaptive physiological processes, as well as morphological changes, is able to compensate very efficiently an adverse condition to its physiology, in this case a decrease of the partial pressure of oxygen in the inspired air. Thanks for the inquiry! Harvard Medical School – Class 1924.

Edward Adolph to Hy:

What am I doing? In my laboratory I continue the comparative study of ontogeny of animal dependence upon oxygen. At my desk I analyze related published reports. Perhaps I can ascertain what benefit some animals obtain as adults by denying themselves the possibilities of anaerobic survival that they can employ as embryos.

Each Spring I attend the APS meetings, and feel fortunate to see a few old-timers and many new-timers there.

The 27th International Congress of Physiology in Paris (1977) gave me glimpses of early and late acquaintances from around the world. Entertainment by the French organizers was generous. Fifty-seven years ago I regarded with awe the hoary members at the first Paris (10th) International Congress of Physiology.

George F. Koepf to Hy:

Your letter of November 6, 1977 as representative of *The Physiologist* has arrived. In response to it I first must state that I am alive, working full-time and healthy enough to have survived the Buffalo blizzard of '77. My work as President of the Medical Foundation of Buffalo is largely administrative. The Medical Foundation is an independent, research institute doing basic research in molecular endocrinology. The program is very exciting and although my role keeps me from the "bench," I find my work most rewarding.

Hal Wiggers to Hy:

Great to hear from you. Caught me in the midst of moving from Greenville, N.C. to Vero Beach, Florida, 32960 (711 Iris Lane) – sort of an off the seat of the pants, irrational decision. Have greatly enjoyed life in Greenville. Retired a second time on September 1, 1977 as special consultant to East Carolina University's new School of Medicine where I assisted in identification and selection of a Dean, recruiting about seven departmental chairmen, planning of temporary and new permanent hospital and medical school buildings, development of curriculum and inter-medical school-hospital agreement and development of a minority student facilitation office – plus special projects of import to the Dean in preparing for the accreditation process. It has been a most rewarding experience assisting in the development of a new medical school. Once the initial class had been admitted, there seemed less need for me to occupy vital space in the crowded temporary facilities – so I resigned Sept. 1, 1977 on my 67th birthday.

Have been fully occupied since – primarily working on projects in and outside the house and attempting to regain some degree of consistency in my golf game which is my major vice. My lawn has been touted by many as the most beautiful in Greenville – nice to hear even if grossly exaggerated. Once all chores had been essentially completed I had planned to publish my thoughts re the inadequacies and inefficiencies of undergraduate medical education in general in the USA including statements which would have been non-strategic to utter while executive officer in a medical school. Perhaps I shall get started on that after our move to Vero Beach, an apparently delightful community of about 16,000 in an even warmer area than Greenville in winter months. Hope to spend one summer month in Albany, N.Y. area – my stamping grounds for 27 years and the residence of my elder daughter and family – and another month in Greenville to see younger daughter and family as well as many new friends gained during our nearly three years here.

I gave much of my past history to Phil Bard shortly before his decease and it was published in *The Physiologist* about a year ago. I also wrote a letter to one of my earliest mentors in physiology, Hal Davis. It pleases me to see that you, Bruce, Maurice, Hal and Adolph are in good health and are keeping the communications among senior physiologists going. Its great fun reading about the various retirement activities of old colleagues.

Have had several offers to teach medical physiology and even pharmacology to graduate students. Flattering, but I recognize my limitations after 24 years as Executive V.P. and Dean and administrative consultant. The field of physiology has advanced and sub-sub-specialized in the interim to a point that is beyond catching. Believe I can be happy spending more time with my wife Ginny, tinkering at horticulturing, golfing and travelling for pleasure rather than as a site-visitor for the Feds. Perhaps our travels will take us to the areas where senior physiologists colleagues have retired, thus permitting brief reunions.

Despite the onset of diabetes about 8 years ago, I seem to maintain reasonable balance with daily insulin injections. My health, gumption, and spirits are good, although I'm not very happy with many happenings and problems in this country and around the world generally. Don't find the daily news very assuring that things will get better before they proceed to get worse. Am disappointed but not surprised that the Federal Legislators accomplish so little of value for the public at large when yearly summaries of their deeds appear. The Presidency appears to be an impossible position for providing great leadership – takes too long, once elected, to fully comprehend the magnitude of the problems to be encountered and met effectively. Nor does he get much assistance from the electorate with its singularly selfish, materialistic expectations. Don't believe I'll become a candidate. Best wishes and the ultimate in health and happiness in 1978.

James Archdeacon to Hy:

Your letter was forwarded to me here in the Department of Physiology at the University of Rhodesia, Salisbury, as a Visiting Professor on a temporary basis. Salisbury is a lovely city and has a wonderful climate.

I retired as Emeritus Professor at the University of Kentucky but you can see that I am keeping busy. I do not know how much longer I'm programmed to keep up the pace. However, I still find trying to teach students about frog muscle physiology is interesting. About one-half of our students are African natives. As you probably surmise daily events keep life interesting here.

Harry Armstrong to Bruce:

It was thoughtful of you to append a personal note to your Society letter. Mary and I are living at the Air Force Village (retirement center) and are well and very content. My only productive activity is described in the enclosed "blurb." The book will reach the market about January 1. As I hope you know, you are one of the people I admire most. Personal regards.

Note: The book referred to by Dr. Armstrong is titled "The Emerging Death Mystique: The Challenge and the Promise" and can be obtained from Exposition Press, Inc., 900 South Oyster Bay Road, Hicksville, N.Y. 11801.

John W. Bean to Bruce:

Certainly you and the other young physiologists who underwrite these requests for information deserve a hearty vote of thanks for getting this material together, keeping us all posted on what other oldtimers are doing in their Golden Years.

Here, Dr. Davenport and staff have been generous enough to permit me the temporary use of a smaller room adjoining my larger laboratory which I vacated on my official retirement. I continued some odds and ends of experimental work but more recently have been doing some leisurely writing about, among other things, some reminiscences of the department for Dr. Davenport who, I think, is planning to write a rather comprehensive history of the department. I guess I am the only one left in the department (with Hayden Nicholson, now in Chicago and Alrick Hertzman in St. Louis, both retirees) who knew Dr. Lombard personally when, in retirement, he was still coming into the laboratory to work with his "Santorini" balance which he made to study metabolic changes in man by measuring gross body weight loss through respiration, and Dr. Robert Gesell during his very early years at Michigan back in the twenties.

I have been in reasonably good health and have recently done a bit of traveling but am not interested in a position either scientific or administrative.

Abraham Cantarow to Hy:

I'm still doing business at the same stand, which means that those in authority at the National Cancer Institute have an idea that I may still have something to contribute to their program. I shall do my best not to disillusion them.

I am, for the moment, feeling quite well, eight months after a long period of hospitalization for a colon cancer, which was removed, apparently completely. So far, there has been no indication of more trouble; I'm keeping my fingers crossed. Thanks for your periodic communications. I do appreciate them and the letters in *The Physiologist.*

Robert E. Johnson to Hy:

I am continuing as Professor of Biology here at Knox College (the old school of Hiram Essex) and Coordinator of the basic medical science program we have for sixteen first-year medical students from Rush Medical College. I keep busy teaching courses in medical physiology, pathophysiology, and human nutrition, publishing an occasional article or book on nineteenth century Arctic biology and medicine and trying to untangle the relationship between direct calorimetry and indirect calorimetry in the Eastern box turtle.

My wife, Margaret, and I are both in good health but we are beginning to think about what to do after I become emeritus not only at the University of Illinois but also at Knox College.

Roy L. Swank to Bruce:

My retirement occurred about two or three years ago from the Medical School. They have allowed me to keep an office and a small laboratory here so I am still quite active seeing patients and in doing some research. In addition, I have been interested in blood filters all these years and have continued working along these lines. My work in multiple sclerosis also is increasing and with the added freedom I have been able to increase my activity there. We have now followed 150 patients with multiple sclerosis for thirty years. These patients are on low fat diet and have done well.

This Spring, we published a book for patients on multiple sclerosis, the title of which is, *The Multiple Sclerosis Diet Book.* This was written by myself and Mary Helen Pullen, published by Doubleday, Inc. I believe this was the first attempt to make something available for patients which would orient them to the disease, its possible causes and what one can do for it.

I have also been very active with Pioneer Filters as their medical representative and in charge of research and development. They manufacture a series of filters which are the result of an invention of mine plus patents. This company has recently been sold to Medishield and I am staying on as a consultant in this same area.

These activities have led me to travel quite a bit and in the last year have made two trips to Europe and the Middle East. These activities have to do with research and development of different types of blood filters.

I find retirement has enabled me to do things which were found to be very difficult to do prior to retirement. If one can retire with energy enough to pursue his interests he is very lucky.

Ichiji Tasaki to Hy:

I am still very active in research, investigating the molecular basis of nerve excitation. I am in excellent health and look forward to having Congress pass the act enabling government employees to continue to work beyond the age of 70.

R. A. Cleghorn to Hy:

I'm still working half-time at the Allan Memorial Institute of Psychiatry, doing outpatient, and some private work. Am particularly interested in the Phenomenon of the so-called Schizo-affective psychosis, and try to follow relevant biochemical developments now, such as enkephalins and endorphins.

Grayson McCouch to Hy:

My wife and I are now living at Kennett Square, Pennsylvania and enjoying the experience of complete retirement imposed by increasing paralysis agitans. Here we find a host of friendly people representing many interests.

Gustav Eckstein to Hy:

It gave me a pleasant poke to read your warm words. Yes, I am still haunted by my pen — far to the closing of my manuscript on Pavlov, not so far but a distance into my Autobiography. I never earlier trusted myself to work at two books, but it is a different game. I may win, and if I don't? It would have been nice for us to have known each other a little.

Barry King:

Bruce Dill received a note from Dr. King's wife, Estelle, saying that he had suffered a stroke in March 1976. She mentioned that Dr. King is doing well but unable to continue his activities.

Isaac Starr to Hy:

It is always a pleasure to hear from you. I continue my scientific activities at the same stand. I am not interested in a new position and I am not free to move to another area.

I go along much as I have since retirement. I have two rooms in the hospital, an office and a small laboratory. In the latter, I and a secretary-technician, assisted by medical students and volunteers, do cardiovascular testing, taking ballistocardiograms and pulse derivatives simultaneously on the hospital patients. The Hospital charges the patients for this service, and credits most of the take to my budget. If the take does not cover the expenses, I raise the rest myself, so I am no burden to anybody.

Using only non-invasive methods which can be repeated as often as one wishes, we are able to study the effectiveness of therapy, both operative and drug, on the physiological aspects of heart disease. In this work, I collaborate with many doctors in the hospital, especially those in the catheterization lab. These doctors send me patients for testing, and later they are likely to find their names listed as co-authors. This system has gone very well; since "retiring" when I was 65, I have published 42 papers (and have one in press) without counting the numerous 250 word abstracts associated with Society presentations.

William A. Weber to Hy:

Many thanks for your letter to an "old soldier" requesting info on "what's cookin".

For the record, I am 66 years young and so-called retired. My major field of teaching and research has been medical microbiology, but until 1966 I also taught medical physiology. Last August, I retired from my teaching position at Miami-Dade Community College in Miami, hoping to combine a part-time teaching assignment with the authoring of several books, some of which are in process. Miami-Dade offered to provide a part-time appointment, but my daughter, who is practicing medicine in the Los Angeles area, induced Mrs. Weber and me to relocate here in Pasadena.

I am hoping to complete a laboratory manual in microbiology for allied health students (presently being used in loose-leaf form at Miami-Dade) and I am planning a text-and-workbook in applied microbiology for the allied health field. Almost completed is also a laboratory manual for a course in environmental microbiology. A book on the microbial diseases in children, in which I co-author the microbiology portion, is being negotiated. That is the extent of my scientific activities at present.

I am interested in a part-time teaching position in the medical and/or allied health field, but at my age no one here appears interested. I think I would be qualified in an administrative or consultant position. After all, I initiated the Allied Health program (now a separate campus) at Miami-Dade in 1966 and administered it until 1970 (setting up 17 programs).

Moving to another area would depend on the circumstances involved. Perhaps I should reconcile myself to social security and retirement benefit for the rest of my days. I wish I could be more useful in my field and living on a fixed income in this inflationary period is not good.

F. Gaynor Evans to Hy:

On January 1, I officially became Emeritus Professor of anatomy here at the University of Michigan. However, I still have an NIH research grant which will continue until the end of May, 1978. I am also involved as an anatomical consultant on a research grant on the carpal tunnel syndrome with some people in the School of Engineering, and I am still Co-Editor-in-Chief of the Journal of Biomechanics. In addition, I am the first President of the American Society of Biomechanics. Next July I have been invited to participate in a NATO Advanced Study Institute, to be held in Ankara, Turkey.

Whether or not I would be interested in another position in which I could continue my scientific activities would depend entirely on the position. I have no objection to moving to another area, depending, of course, on the circumstances at that time. I would, however, be interested in hearing about any position involving teaching human gross anatomy at a medical school and research in biomechanics, especially bone.

Albert R. Behnke, Jr. to Bruce:

It was a heart-warming privilege to see you at Brooks Air Force Base in Texas where we were subjects in Loren Myhre's pleasant determinations of total body water by merely ingesting ethanol and exhaling into a sophisticated analyzer. The occasion recalled your initial guidance in the early 30's in analysis of nitrogen elimination data at the Harvard School of Public Health. One handicap at the time was lack of gross body composition data, specifically quantification of total body water. Now with densitometry and ethanol-derived TBW (a follow-through of Myhre's experience in Ulrich Luft's laboratory), the nitrogen transport data has greatly increased meaning and application in decompression of divers.

In connection with the ethanol tests and illustrative of inter-laboratory cooperation, was the opportunity for Lt. David Miller, physiologist at the Medical Submarine Laboratory, New London, to come to Brooks AFB to demonstrate his perfected technique of collection of parotid fluid for ethanol analysis. As a perennial subject, I followed you in the ^{40}K and whole body volumetric determinations. In addition to analysis of breath ethanol, samples of parotid fluid and blood were taken for determinations of ethanol. It will be interesting to see what is happening to our dwindling lean body mass.

Taking a broad view of the Brooks AFB experience, it is gratifying not only to see the sustained progress over a period of several decades in *in vivo* analysis of body composition, but also the cooperation between military laboratories and the impetus by commanding officers to advance physiologic studies by an open door policy of investigative collaboration.

In conclusion, let me add an amendment which like political bills in Congress, is unrelated to the substance of this letter. In connection with review of manuscripts submitted for publication, I have attempted to abrogate our "Star Chamber" confidential system and to allow referees to confer with authors in the cooperative effort to improve quality of papers and expedite either acceptance or rejection. Why we continue to maintain an anachronism from the Dark Ages in current enlightened scientific collaboration is as incredible to me as having all attendees at scientific meetings wear masks.

John J. Sampson to Hy:

There is little that I have to add to my record of interests and activities. This calls for active teaching at the University of California and Mt. Zion Medical Center but still retain an annual appointment as Clinical Professor of Medicine with a

scattering of committee assignments, the most interesting and complex being chairman of the Committee on Human Experimentation at Mt. Zion. Last year completed a four-year term as President of the Inter-American Cardiology Society, the best dividend being the close association with cardiologists of the Americas — especially the Latins. Quite busy in private practice recently with a bright young associate.

My wife is well and busy with community affairs and the unequalled pleasure of being with the grandchildren.

Irvine Page to Hy:

How nice to hear from you and know that at least you are still among those modern youth call "viable." I have turned 77 and continue to like to exaggerate the figure because it makes people say, "My you look well," showing they expected the worst. I think the Cleveland Clinic has given up trying to retire me. About all of note in my "declining years" has been to decline the long trips to meetings and decline to participate or worry about the future of Washington, D.C. I still like money but don't know what to do with it when I get it.

Bee and I live for about four months at Hyannis Port and the rest of the time in Cleveland. The warm climates I love, but she doesn't, so you see who prevails. No one would live in Cleveland except for the fact that it is a great and progressive city with a 31 year-old mayor.

The book on the Mosaic Theory is still being finished as I believe I have said before. If people would only stop work in the fields of hypertension and arteriosclerosis, I would have no problem except for the fact that the kids are making things awfully complex. I have just partially retired as editor of *Modern Medicine*, which surely will be a relief for its readers. Once I get the hypertension book finished, I hope to do one on some of my gripes. You may be sure when and if I come to New Orleans, I will expect to see you both.

Charles C. Hassett to Bruce:

Since my last report to you, I have become even busier, so that instead of feeling that I have retired, I seem merely to have transferred the scene of my activities. Shortly after I left the Biomedical Laboratory at Edgewood, I was invited to become a consultant (one of many) to the Division of Criteria Documentation and Standards Development of the National Institute of Occupational Safety and Health (NIOSH). This involves the study of proposed standards for allowable amounts of hazardous substances in industrial operations, followed by attendance at reviews which are held at NIOSH to criticize the drafts of the standards. These reviews usually require 3-5 days, sometimes longer. Both Keith Jacobsen and Henry Wills are on the NIOSH staff, so I have the pleasure of associating with them from time to time.

This year I was asked to take on some additional work for the Priorities and Research Analysis Branch of NIOSH. This has been reviewing and editing of material derived from the standards but somewhat simplified for the information and guidance of industrial firms. This has been easy to do since the documents are sent to me and I work at home. All this, with the care of our house in Towson and the one in Woods Hole, keep me occupied most of the time.

I can say very little about Edgewood, for I have not been there in nearly six months. The traumatic and unjustified political invesitgation of two years ago, set off by the CIA affair, left the laboratory program a wreck and ruined the morale of the staff. Since then, funding and staff have been cut, so that very little is being done. Medical defense against chemical warfare is standing still and letters to congressmen and senators get nothing but polite, noncommittal answers.

I enjoyed your article on L. J. Henderson very much.

Aldo A. Luisada to Bruce:

I have continued my activities as Chairman of the Department of Cardiology of the Oak Forest Hospital. In this position I have very exacting duties that involve supervision of physicians and technicians, examination of patients, pioneer work with refined equipment through the use of non-invasive methods, postgraduate lectures, supervision of Residents and students and, of course, attendance to meetings and exciting work in several committees.

Apart from the five days a week in this hospital, I work another day in another hospital as Consultant. My connection with The Chicago Medical School is now much looser than in the past but I still give a few lectures to medical students.

I lack the availability of a laboratory for animal experimentation. However, through the help of old friends in the Department of Physiology, I have been able to complete a study on the function of the aortic valve. This study, which led to some modifications of previously held views, has now been published.

During the last Winter and Spring, I studied several hundreds of patients with blocks, arrhythmias, or mitral stenosis by means of phonocardiography and echocardiography. This study led to a thorough evaluation of the amplitude of the first heart sound in clinical conditions. The conclusions confirmed my previous studies in animals and are opposite to the views that are still entertained in some clinical circles. These studies are now in publication and will appear in 1978.

I lectured in Europe during the month of May but I combined work with vacation.

As you can see, there has been no gap in activity since my "retirement," and I am hopeful that I will be able to perform useful work and to contribute to the development of new knowledge for a few more years.

My dear wife has helped me through scolding and lecturing me in maintaining a clear perspective, and my granddaughter, age 10, is a source of continuous pleasure.

Heinz Specht to Bruce:

After my retirement in 1971 and Louise's and my decision to travel extensively, I terminated all my professional journal subscriptions with the exception of JAP, donating all my file of past issues to the Wilkes College Library which had its science stacks flooded by hurricane Hazel.

My connection with the Medical School of the University of Puerto Rico is tenuous at best, but I have visited and met some of the staff while Louise and I have spent our several tours on the island. My son Philip and his wife Susan are on the faculty. Philip has become deeply involved in curricular changes which are designed to graduate more students — his efforts being mainly to enhance the quality of the courses, while that of the students is to get a diploma and to enter practice! Competition from diploma mills, both local and in adjacent countries are a constant vexation to both the students and the faculty.

As to our own activities, I have had the pleasure of several trips within Morocco with our long-time friend Gordon Browne to whom this terrain is a second homeland. It was our good luck to get to visit non-tourist areas from top to bottom and through the mountains. It resulted in a lot of rug buying but was also rewarding in that our companions and guide were

anthropologists with wide experience and interests in the migration of Arabic and Phoenician peoples on the North African scene. We were treated to visits to Lixus, Mercuri, Volubilis and other less well-known sites that still show ruins of the later occupation by the Romans but were early-on sites of prior migrants.

We have also had several opportunities to travel in Europe, mainly in Germany, France and Portugal. In Germany I have a cousin in professional medicine who was of considerable assistance in getting entree to researchers and in analyzing political maneuvers while I was stationed in Paris as Chief of the European Office of the (then) Office of International Research of NIH.

Besides our wanderings in the US, which are mainly to contact our three sons and our daughter, we have just returned from a three-week stay in Japan where we have many longtime friends as well as many former grantees of NIH whom I had the pleasure of visiting often while I was stationed in Tokyo as Chief of the Pacific Office of the Office of International Research of NIH. It was also apparent that NIH's former assistance to these individuals was an academic watershed for them — being the means for establishing international recognition in their fields. What is less understood by the political decision-makers in our Congress is the fact that these grantees established successful overseas extensions of programs which were of direct interest to our scientists in Biomedicine. These aspects were volunteered by a number of these former grantees without any prompting on my part and without any prospect of any current support. My inquiries as to any interest in documenting this phenomenon by NIH seems to arouse no enthusiasm. I still think the foreign grants program was a "cost-productive" plus and should not have been scuttled.

As to the more personal aspects of our retired existence here, we are involved in conservancy efforts, both as donors and activists. We swim with the "senior citizens," we bike on the new path along the Mohawk River, we cross-country ski both on the West Hill grounds and on accessible areas nearby, I tie trout flies and lose them in the many local streams, we attend the numerous local orchestral and other musical events, and mess around with a garden and shop. I can't remember how I got all these things done on weekends before retiring; I must be slowing down. Fortunately I don't have to punch a clock and have few deadlines to meet.

The Society has been notified that Honorary Member **Dr. Yasu Kuno**, Japan's premier physiologist and an outstanding thermoregulation physiologist died on December 30, 1977.

HEALTH, SCIENCE & SOCIETY: SCIENTIFIC SOLUTIONS & HUMAN PROBLEMS

The University of California, San Francisco School of Dentistry, Medicine, Nursing and Pharmacy and Continuing Education Health Sciences will present a two-day Symposium on Health, Science and Society on April 20-21, 1978 at the Sheraton-Palace Hotel in San Francisco.

For further information regarding program and registration write or call: Mrs. Bruce, University of California, San Francisco, Continuing Education in Health Sciences, 1343 Third Ave., San Francisco or call (415) 666-3904.

1st INTERNATIONAL CONFERENCE ON MECHANICS IN MEDICINE AND BIOLOGY

The first International Conference on Mechanics in Medicine and Biology will be held in Aachen, West Germany, August 30 - September 1, 1978.

The conference is planned to comprehensively represent the full scope of Theoretical and Experimental Mechanics in the Medical and Biological arena. It is thus hoped to bring together all international scientists in this field and to stimulate a mutual exchange of ideas from the various research areas.

Contributions are invited in the following topics: Cardiac Mechanics; Cardiovascular Mechanics; Respiratory Mechanics; Biorheology, Gas and Surface Interactions, Cryogenics; Bio-Heat and Masstransfer; Modeling of Biological Systems and Phenomena; Neuro-Sensory-Muscular Mechanics; Muscular-Skeletal-Joint Mechanics; Limb and Body Motion; Sports and Athletics Mechanics; Renal-Ureter-Bladder Mechanics; Ergonomics; Mechanics of Injuries; Mechanics of Living Systems; Principles of Measurement Techniques in Medicine and Biology.

The deadline for receipt of abstracts is March 31, 1978. For forms and other information write to: Conference Secretariat: Mrs. G. M. Stöhr, Helmholtz-Institut an der RWTH Aachen, Goethestr. 27/29, D-5100 Aachen, Germany.

CORRIGENDA

Volume 20, Number 6, December 1977

Page 9: "118th Business Meeting." First column, line 12, "1977" should read "1976."

Volume 20, Number 2, April 1977

"L. J. Henderson, His Transition from Physical Chemist to Physiologist." Page 11: End of next to the last paragraph, "He was profoundly shocked when Mike committed suicide in 1927" should read "He was profoundly shocked when Mike abandoned physiology and biochemistry in 1927."

The following letter from Dr. Bruce Dill gives an explanation:

"John Edsall wrote that he thought I was incorrect in stating on page 11 of my Henderson paper that Mike Murray had committed suicide. Mike's brother Harry, living and active at age 84, confirms John's impression. I am correct in stating that Henderson was profoundly shocked. How suicide became fixed in my mind is a mystery. What happened was Mike's divorce, shift from physiology and biochemistry to psychiatry, and his move to New York where he died of leukemia a few years later."