News from the
American Heart Association

44 East 23rd Street, New York, New York 10010
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AHA Awards $2 Million
In Research Support

Fellowship and Investigatorship awards totaling approximately $2,000,000 have been made under the American Heart Association's national research program for the fiscal period beginning July 1, 1965.

Additional national awards to be made in the Grant-in-Aid category will be announced soon.

Included in the present allocations are continuing awards for 12 Career Investigators, 75 Established Investigators, 24 Advanced Research Fellows, and four Career Investigator Fellows. New awards were made to 20 Established Investigators and 19 Advanced Research Fellows.

A new schedule of increased base stipends and group life insurance benefits for Established Investigators will also become effective on July 1, 1965.

The list of awardees and the titles of their studies are carried at the end of this "News" section.

May 15 is Abstracts Deadline
For AHA Scientific Sessions

May 15, 1965 is the deadline for receiving abstracts of papers to be presented at the American Heart Association's Scientific Sessions, scheduled for October 15-17 in the Hotel Americana, Bal Harbour, Fla.

Papers intended for presentation should be based on original studies in, or related to, cardiovascular disease. Abstracts, briefly digesting results and conclusions, should be kept to 250 words.

Forms for submitting abstracts may be obtained from Richard E. Hurley, M.D., American Heart Association, 44 East 23rd Street, New York, N.Y., 10010. Applications for scientific exhibit space are also available from Dr. Hurley. These are likewise returnable by May 15, 1965. Space for industrial exhibits may be requested through Steven K. Herlitz, Inc., 850 Third Avenue, New York, N.Y. 10022.

Session for Neurologists
On Stroke at AHA Meeting

Neurologists, neuropathologists and neurosurgeons are invited to submit abstracts of papers for presentation at a one-day scientific session on stroke at the Association's 1965 Scientific Sessions in Bal Harbour, Fla.

Although previous AHA Scientific Sessions have included programs on stroke primarily for the clinician, the 1965 event will emphasize the presentation of original investigative work in the cerebrovascular field.

The session was recommended by AHA's Coordinating Committee on Nationwide Stroke Program to make it possible for neurologists, cardiovascular surgeons and cardiologists to exchange and coordinate their experience and thinking in this area of research and treatment.

A highlight of the stroke session will be the George E. Brown Memorial Lecture on "Inter-Arterial Shunts in the Cerebral Circulation," by James F. Toole, M.D., Chairman, Department of Neurology, Bowman-Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.

May 15, 1965 is the deadline for receipt of abstracts, which should be based on original investigations related to cerebrovascular disease. Forms for submitting abstracts (limited
to 250 words) may be obtained from Richard E. Hurley, M.D., American Heart Association, 44 East 23rd Street, New York, N.Y. 10010.

The AHA Scientific Sessions run from October 15-17, with the stroke session taking place on Saturday, October 16.

3 Day Cardiology Course
In Birmingham, May 20-22

"Principles and Problems of Ischemic Heart Disease" will be discussed in the postgraduate course, Three Days of Cardiology, to be held in the University of Alabama Medical Center, Birmingham, from Thursday, May 20, through Saturday, May 22.

The course, co-sponsored by the AHA Council on Clinical Cardiology and the University of Alabama Medical Center in cooperation with the Alabama Heart Association, will be directed by T. Joseph Reeves, M.D., and Tinsley R. Harrison, M.D. Visiting faculty for the course will include the following:

Drs. Richard J. Bing, Detroit; Gottlieb C. Friesinger, Baltimore; Donald E. Gregg, Washington, D.C.; J. Willis Hurst, Atlanta; and Oglesby Paul, Chicago.

Another Three Days of Cardiology course is scheduled for September 15-17, 1965, in St. Paul, jointly sponsored by the Council on Clinical Cardiology, Charles T. Miller Hospital and Minnesota Heart Association. Jesse E. Edwards, M.D., will direct this course. The subject is "Functional Pathology of Congenital and Acquired Valve Disease."

Arteriosclerosis Council
Abstracts Due May 15

Abstracts of papers intended for presentation at the annual meeting of the AHA Council on Arteriosclerosis must be received by May 15, 1965. The meeting is scheduled for Wednesday and Thursday, October 13-14, in the Hotel Deauville, Bal Harbour, Fla., preceding the Association's annual Scientific Sessions.

Forms for submitting abstracts, not to exceed 250 words, may be obtained from the AHA national office, 44 East 23rd Street, New York, N.Y. 10010. Both members and non-members are invited to submit abstracts. All interested individuals may attend the Council sessions.

AHA Endorses Legislation
To Aid Medical Libraries

Congressional bills providing for federal grants to help improve medical library services and facilities have been given support by the American Heart Association.

Commending the purposes of the proposed legislation, Dr. Carleton B. Chapman, Association president, pointed out that it would implement a recommendation made by the President's Commission on Heart Disease, Cancer and Stroke.

Twin bills, introduced in the Senate last January by Senator Lister Hill (D.-Ala.) and in the House of Representatives by Representative Oren Harris (D.-Ark.), include provisions for federal assistance in the construction of new medical libraries, and the renovation, expansion or rehabilitation of existing facilities; in the training of medical librarians and other information specialists in the health sciences; for research in medical library science and related activities; and for the support of biomedical scientific publications.

Dr. Chapman's endorsement of the bills followed action by the AHA Board of Directors supporting such legislation in principle.

Session on Cardiology Set
At AMA Annual Meeting

The American Heart Association will participate jointly with the American Medical Association and the American College of Cardiology in a half-day cardiovascular program on June 22, to be given in conjunction with the AMA's Annual Meeting. The AMA Annual Meeting is scheduled for Sunday, June 20, through Thursday, June 24, 1965, at New York's Hotel Americana.

Board of Pediatrics
Announces Examinations

The written examination of the Sub-Board of Pediatric Cardiology will be held June 4,
1965, the American Board of Pediatrics has announced. April 15, 1965, is the closing date for receipt of applications for candidates wishing to take this examination. Oral examinations in this subspecialty will be held in the Fall, exact dates to be announced later.

Meetings Calendar


May 2-5: American Society for Clinical Investigation, Atlantic City. Dr. O. W. Liddle, Vanderbilt University Medical School, Nashville 5, Tenn.

May 4-5: Association of American Physicians, Atlantic City. Dr. Eugene A. Stead, Jr., Duke Hospital, Durham, N. C.

May 20-22: 3 Days of Cardiology (Principles and Problems of Ischemic Heart Disease), Birmingham. Dr. F. J. Lewy, American Heart Association, 44 East 23rd Street, New York 10010.


June 17-20: American College of Angiology (Annual Meeting), New York. Dr. Alfred Halpern, 50 Broadway, New York, N. Y.


June 22: Cardiology Session, sponsored by AHA, AMA and American College of Cardiology, New York. AHA Medical Education Department, 44 E. 23rd St., New York 10010.

June 27-29: International Congress on Smoking and Health (First), New York. W. A. Scharffenberg, 6830 Laurel St., N.W., Washington 12, D.C.

August 9-12: National Medical Association, Cincinnati. Dr. John T. Givens, 1108 Church St., Norfolk 10, Va.


August 30-September 2: American Hospital Association, San Francisco. Dr. Edwin L. Crosby, 840 N. Lake Shore Drive, Chicago 60611.

September 15-17: 3 Days of Cardiology (Functional Pathology of Congenital and Acquired Valve Disease), St. Paul. Dr. F. J. Lewy, American Heart Association, 44 East 23rd Street, New York 10010.

September 16-18: International Cardiovascular Society (7th International Congress), Philadelphia. Dr. R. A. Deterling, Jr., 171 Harrison Ave., Boston 02111.

September 28-October 1: American Roentgen Ray Society, Washington, D.C. Dr. C. Allen Good, Mayo Clinic, Rochester, Minn.

September 29-October 1: American Association of Medical Clinics, Washington, D.C. Dr. R. S. Condie, 300 Homer Ave., Palo Alto, Calif.


October 28-November 3: Association of American Medical Colleges, Philadelphia. Dr. R. H. Young, 303 E. Chicago, Chicago 60611.


November 12-14: Association of Clinical Scientists, Washington, D.C. Dr. R. P. MacFate, 300 N. State, No. 5322, Chicago 60610.


**AHA Award Recipients**

A list of investigators who are being supported by grants from the American Heart Association for the fiscal period beginning July 1, 1965, follows:

**Career Investigators**

- **Clements, John A.**, Cardiovascular Research Institute, University of California Medical Center, San Francisco.
- **Cohn, Mildred**, University of Pennsylvania School of Medicine, Philadelphia.
- **Coons, Albert H.**, Harvard Medical School, Boston.
- **Gottschalk, Carl W.**, University of North Carolina School of Medicine, Chapel Hill.
- **Lorber, Victor**, University of Minnesota Medical School, Minneapolis.
- **Morales, Manuel F.**, Cardiovascular Research Institute, University of California Medical Center, San Francisco.
- **Pappenheimer, John R.**, Harvard Medical School, Boston.
- **Ratnoff, Oscar D.**, Western Reserve University School of Medicine, Cleveland.
- **Sprinson, David B.**, Columbia University College of Physicians and Surgeons, New York.
- **Wannamaker, Lewis W.**, University of Minnesota Medical School, Minneapolis.
- **Zilversmit, Donald B.**, University of Tennessee College of Medicine, Memphis.

**Continued Established Investigators**

- **Barnett, G. Octo**, System analysis of cardiovascular function and control mechanisms in the intact unanesthetized animal. Peter Bent Brigham Hospital, Boston, Massachusetts.
- **Bouman, Roger H.**, Sources of energy employed by heart muscle and the regulatory factors involved. Vanderbilt University School of Medicine, Nashville, Tennessee.
- **Brierley, Gerald P.**, Ion accumulation in isolated heart mitochondria. Ohio State University College of Medicine, Columbus, Ohio.
- **Carrasquer, Gaspar**, Electrolyte and water function of the kidney; mechanism of tubular ion transport and acidification of the urine. University of Louisville School of Medicine, Louisville, Kentucky.
- **Cerny, Lawrence G.**, Rheology of blood. Masonic Medical Research Laboratory, Utica, New York.
- **Craig, Albert B.**, Man's responses to submersion in water. University of Rochester School of Medicine and Dentistry, Rochester, New York.
- **Dennis, Warren H.**, Relationship between membrane structure and permeability. University of Wisconsin Medical School, Madison, Wisconsin.
- **Dickerman, Herbert W.**, Role of vitamin B12 in the control of cellular metabolism. National Heart Institute, Bethesda, Maryland.
- **Di Ferrante, Nicola**, Chemical bonding of vasoactive amines and peptides to receptor sites in target tissues. Retina Foundation, Boston, Massachusetts.
- **Donaldson, Virginia H.**, Characterization of proteolysis by plasmin and mechanism of activation of plasminogen. St. Vincent Charity Hospital, Cleveland, Ohio.
- **Dales, John T.**, Oxygen consumption and heat production of resting and working skeletal muscle. Johns Hopkins University School of Hygiene and Public Health, Baltimore, Maryland.
- **Fasman, Gerald D.**, Synthesis and use of synthetic polyamino acids as models of proteins in structural and biological studies. Brandeis University, Waltham, Massachusetts.
- **Fleischer, Sidney**, Physiological role of lipid in the function of the mitochondrion and other membranes. Vanderbilt University School of Medicine, Nashville, Tennessee.

*Established Investigatorship-Grantees*
Friedberg, Samuel J., Metabolism of chylomicrons. Duke University Medical Center, Durham, North Carolina.

Frimpter, George W., Protein and amino acid metabolism in renal diseases. Cornell University Medical College, New York, New York.

Gillis, Charles N., Factors influencing the retention and subcellular distribution of catecholamines in the heart. Yale University School of Medicine, New Haven, Connecticut.

Glauser, Stanley C., Molecular physiology of normal and abnormal hemoproteins. University of Pennsylvania Graduate School of Medicine, Philadelphia, Pennsylvania.

Glick, Gerald, Determinants of ventricular function and cardiac output. National Heart Institute, Bethesda, Maryland.


Goodkind, M. Jay, Endocrine effects on myocardial metabolism and ventricular function. Philadelphia General Hospital, Philadelphia, Pennsylvania.

*Hall, Philip W., III, Amino acid-electrolyte interrelationships. Cleveland Metropolitan General Hospital, Cleveland, Ohio.

Heimberg, Murray, Hormonal control of fat metabolism. Vanderbilt University School of Medicine, Nashville, Tennessee.

Herd, J. Alan, Central nervous system control of cardiovascular and renal function in unanesthetized animals. Harvard Medical School, Boston, Massachusetts.

*Hess, Marilyn E., Relation of cardiac metabolism to heart function. University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

Hoffman, Julien I. E., Ventricular responses to sudden or sustained changes of inflow volume or outflow resistance. Albert Einstein College of Medicine of Yeshiva University, New York, New York.

Hurley, Edward J., Physiological consequences of cardiac transplantation. Stanford University School of Medicine, Palo Alto, California.

Iyengar, M. Raja, Characterization of actin from normal and failing dog hearts. University of Pennsylvania School of Veterinary Medicine, Philadelphia, Pennsylvania.

Jackson, Benjamin T., Fetal cardiovascular physiology, normal and pathologic. Boston University School of Medicine, Boston, Massachusetts.

*Jensen, David, Basic mechanisms of cardiac automa-
tism. Scripps Institution of Oceanography, University of California, La Jolla, California.

Kalf, George F., Oxidative phosphorylation in sub-
mitochondrial extracts. Seton Hall College of Medicine and Dentistry, Jersey City, New Jersey.


Katz, Joseph, Intermediate metabolism of lactating mammary gland. Institute for Medical Research, Cedars of Lebanon Hospital, Los Angeles, California.

Kot, Peter A., Blood flow and velocity patterns. Georgetown University School of Medicine, Washington, D.C.

*LaBella, Frank S., Anterior and posterior pituitary hormones; storage, secretion and action on connective tissue. University of Manitoba Faculty of Medicine, Winnipeg, Manitoba, Canada.

Lacy, William W., Metabolism in uremia. Vanderbilt University School of Medicine, Nashville, Tennessee.

Lassiter, William E., Calcium transport in the mammalian nephron. University of North Carolina School of Medicine, Chapel Hill, North Carolina.

Levinsky, Norman G., Regulation of sodium excretion. Boston University School of Medicine, Boston, Massachusetts.

Levitt, Howard, Micropuncture studies of renal tubular function. Yale University School of Medicine, New Haven, Connecticut.

Litt, Mortimer, Role of eosinophils in immune processes. Boston City Hospital, Boston, Massachusetts.

Lowey, Susan, Chemistry of muscle proteins. Children's Cancer Research Foundation, Boston, Massachusetts.


Maffly, Roy H., Coupling of metabolic energy and active sodium transport. Stanford University School of Medicine, Palo Alto, California.

Malt, Ronald A., Keratin synthesis and its relation to the differentiation of skin. Massachusetts General Hospital, Boston, Massachusetts.

Martonosi, Anthony N., Functional groups of actin participating in the actin-actin, actin-ATP and actin-myosin interaction. Retina Foundation, Boston, Massachusetts.


Miller, Tracy B., Action of antidiuretic hormone. Harvard Medical School, Boston, Massachusetts.

Mitchell, Jere H., Reflex regulation of cardiorespira-
tory performance. University of Texas Southwestern Medical School, Dallas, Texas.

Nathan, Paul, Transplantation reaction in kidney and
skin. May Institute for Medical Research of the
Jewish Hospital Association, Cincinnati, Ohio.

*Pearce, Charles W., Tolerance of mammals to pro-
found hypothermia and hypothermic preservation
of organs. Tulane University School of Medicine,
New Orleans, Louisiana.

Pelfer, James J., Metabolism of lipids found in the
blood-vascular system. Karolinska Institute, Stock-
holm, Sweden.

Penn, John A., Prothrombin activation; quantitation
of accelerator activity and effect of glycolytic
enzymes. University of Michigan Medical School,
Ann Arbor, Michigan.

*Peterson, Raymond D. A., Host factors in resistance
to infection. University of Minnesota Medical
School, Minneapolis, Minnesota.

Pieper, Heinz P., Performance of the heart in the in-
tact anesthetized dog studied with miniaturized
catheter type instrumentation. Ohio State Univer-
sity College of Medicine, Columbus, Ohio.

Rabinowitz, David, Metabolic exchanges in skeletal
muscle in man. Johns Hopkins Hospital, Baltimore,
Maryland.

Regan, Timothy J., Metabolic basis of ion transport
in the heart and relationship to its functional prop-
erties. Seton Hall College of Medicine and Den-
tistry, Jersey City, New Jersey.

Roden, C. N. Lennart, I. Structure of chondromuco-
protein. II. Biosynthesis of blood group substances.
La Rabida-University of Chicago Institute, Chicago,
Illinois.

*Roheim, Paul S., Mechanisms of lipoprotein forma-
tion. Albert Einstein College of Medicine of Yeshiva
University, New York, New York.

Roth, Carl F., Cardiac function and venous pressure
control in hemorrhagic shock. Indiana University
School of Medicine, Indianapolis, Indiana.

Samuels, Arthur J., Immuno-enzymology of heart
muscle proteins; search for immuno-chemical evi-
dence for configurational changes in enzymes of
heart muscles during congestive failure. Hunter
College, New York, New York.

Scharff, Thomas G., Sugar and potassium ion trans-
port in yeast. University of Louisville School of
Medicine, Louisville, Kentucky.

Schultz, Stanley G., Interaction between sodium,
sugar and amino acid transport in rabbit ileum.
Harvard Medical School, Boston, Massachusetts.

Smith, Archie L., Mechanism of energy transduction
reactions in mitochondria and other transducing
systems. Columbia University College of Physi-
cians and Surgeons, New York, New York.

*Soroff, Harry S., I. Metabolic and hemodynamic ef-
fects of assisted circulation. II. Development of
partial and complete prostheses for replacement
of diseased aortic and mitral valves. New England
Center Hospital, Boston, Massachusetts.

Sperelakis, Nick, Conduction in heart. University Col-

*Spiro, Robert G., Structure and metabolism of gly-
coproteins. Harvard Medical School at Elliott P.
Joslin Research Laboratory, Boston, Massachusetts.

Stoffyn, Pierre J., Chemistry of glycoproteins. McLean
Hospital, Belmont, Massachusetts.

Ways, Peter O., Membrane lipids in normal and path-
ological red blood cells of man. King County Hos-
pital, Seattle, Washington.

Webster, George C., Structural units, functions and
origin of heart microsomes. University of Wiscon-
sin, Madison, Wisconsin.

Wells, William W., Lactose diets and cholesterol
metabolism. Max Planck Institute, Munich, Ger-
many.

Welsh, Richard S., Characterization of undegraded,
non-fibrous forms of desoxyribonucleoprotein from
calf thymus. National Institute of Neurological
Diseases and Blindness, Bethesda, Maryland.

Wortman, Bernard, Mucopolysaccharides of the nerv-
ous system and its blood vessels, with particular
reference to the retina. Washington University
School of Medicine, St. Louis, Missouri.

New Established Investigators

Blinks, John R., Drugs and the mechanical properties
of heart muscle. Harvard Medical School, Boston,
Massachusetts.

Buchwald, Henry, Effect of ileal bypass on body
cholesterol and on atherosclerosis. University of
Minnesota Medical School, Minneapolis, Minnesota.

Clapp, James R., Urea and bicarbonate reabsorp-
tion by the mammalian kidney. Duke University
School of Medicine, Durham, North Carolina.

Conrad, Margaret C., Pathophysiology of peripheral
vascular disease. Bowman Gray School of Medicine
of Wake Forest College, Winston-Salem, North Caro-
olina.

Danforth, William H., Control of glycogen synthesis
and degradation in muscle. Washington University
School of Medicine, St. Louis, Missouri.

Fairhurst, Alan S., Mechanism of action of ryan-
dine on muscle. University of California at Los
Angeles Center for Health Sciences, Los Angeles,
California.

Fleischman, Julian B., Structural on 7S and 19S
gamma-globulin. Washington University School of
Medicine, St. Louis, Missouri.

Greenfield, Joseph C., Instantaneous pressure and
flow relationships in the human circulation. Duke
University Medical Center, Durham, North Caro-
olina.

Grey, Howard M., Relationship between the structure
and function of antibody. Scripps Clinic and Re-
search Foundation, La Jolla, California.

Hilgard, Henry R., Mechanisms of immunity and
immunological tolerance. Stanford University School
of Medicine, Palo Alto, California.

Inesi, Giuseppe, Sarcoplasmic membranes and intra-
cellular concentrations of ions in heart tissue. Uni-

Circulation, Volume XXXI, April 1965
versity of California Medical Center, San Francisco, California.


McCann, Frances V., Electrophysiology of invertebrate heart muscle. Dartmouth Medical School, Hanover, New Hampshire.


Schuder, John C., Energy transport and conversion for a permanently implanted artificial heart. University of Missouri School of Medicine, Columbia, Missouri.

Scott, Jerry B., Local regulation of blood flow. University of Oklahoma Medical Center, Oklahoma City, Oklahoma.

Seidel, John C., Protein, nucleotide, and metal ion interactions in contraction of muscle. Retina Foundation, Boston, Massachusetts.

Tierney, Donald F., Some interrelationships of surface phenomena, metabolism, structure and function of the lung. University of California Medical Center, San Francisco, California.

Wessel, Hans U., Digitalis antagonism; thermal dilution techniques for cardiac output. Northwestern University Medical School, Chicago, Illinois.

White, Fred C., Mechanism of action of the coenzymes of the a-ketoacid dehydrogenases. Brigham Young University, Provo, Utah.

Continued Advanced Research Fellows


Biber, Thomas U. L., Micropuncture study of the diseased mammalian kidney. Under Carl W. Gottschalk, University of North Carolina School of Medicine, Chapel Hill, North Carolina.

Blafox, Morton D., Action of serum antibodies on the vasculature of all viable tissues. Under John P. Merrill, Peter Bent Brigham Hospital, Boston, Massachusetts.

Brady, June P., Control of heart rate and respiration in the newborn infant. Under William H. Tooley, Cardiovascular Research Institute, University of California Medical Center, San Francisco, California.

Carnazzo, Anthony J., Evaluation of protective effect of epinephrine on the heart subjected to acute shunted volume overload. Under Richard B. Booth, Creighton University School of Medicine, Omaha, Nebraska.

Crider, Quincy E., Effect of methyltestosterone on canine lipoprotein metabolism. Under Reagan H. Bradford, Oklahoma Medical Research Institute, Oklahoma City, Oklahoma.


Fenestal, Darrell D., Role of metabolic processes in active sodium transport. Under Isidore S. Edelman, Cardiovascular Research Institute, University of California Medical Center, San Francisco, California.

Felts, Philip W., Action of hormones upon adipose tissue deacylases. Under Otto Wieland, University of Munich, Munich, Germany.


Foster, Giraud V., Isolation and characterization of "calcitonin"—a hypocalcemia producing hormone which may affect heart metabolism. Under Iain MacIntyre, Post Graduate Medical School, London, England.


Hirsch, Leroy J., Cardiac dynamics and myocardial energetics. Under Louis N. Katz, Cardiovascular Institute, Michael Reese Hospital and Medical Center, Chicago, Illinois.

Kite, Joseph H., Jr., Use of cell cultures to study experimental and human autoimmune disease. Under Noel R. Rose, State University of New York at Buffalo School of Medicine, Buffalo, New York.

Moss, Arthur J., Biomedical engineering analysis of myocardial dynamics during ventricular diastole. Under Paul N. Yu, University of Rochester Medical Center, Rochester, New York.


Pragay, Desider A., Actin polymerization and ATP hydrolysis. Under John Gergely, Institute of Biological and Medical Sciences, Retina Foundation, Boston, Massachusetts.

Richards, Frank F., Antibody specificity and function. Under Edgar Haber, Massachusetts General Hospital, Boston, Massachusetts.


Smith, William James, Biochemistry of the chromaffin granule protein of the adrenal medulla. Under Norman Kirshner, Duke University Medical Center, Durham, North Carolina.

Takeda, Yasuhiko, Human fibrinogen metabolism and distribution. Under E. B. Reeve, University of Colorado School of Medicine, Denver, Colorado.

Tanzer, Marvin L., Experimental lathyrism. Under Jerome Gross, Massachusetts General Hospital, Boston, Massachusetts.

Tarcher, Alyce Bezman, Triglyceride metabolism in carbon tetrachloride and ethionine-induced fatty liver. Under John V. Carbone, University of California Medical Center, San Francisco, California.

Vaamonde, Carlos A., Circulatory factors and renal function in hypertension and in Laennec's Cirrhosis. Under Solomon Papper, University of New Mexico School of Medicine, Albuquerque, New Mexico.

New Advanced Research Fellows

Beechwood, Emory C., Protein transport by the rabbit kidney. Under E. Lovell Becker, New York Hospital-Cornell Medical Center, New York, New York.

Coggins, Cecil H., Diuretics and CO₂ production in the short-circuited toad bladder. Under Alexander Leaf, Massachusetts General Hospital, Boston, Massachusetts.


Fong, Susie W., Quantitative isotopic studies of the ABO blood groups. Under S. P. Masouredis, University of California School of Medicine, San Francisco, California.


Gettes, Leonard S., K and drug effects on the cells and electrogram of perfused moderator band. Under Borys Surawicz, University of Kentucky Medical Center, Lexington, Kentucky.

Holcenberg, John S., Nicotinic acid metabolism. Under Earl R. Stadtman, National Heart Institute, National Institutes of Health, Bethesda, Maryland.


Lenard, John, Affinity labelling studies on antibodies. Under S. J. Singer, University of California San Diego, La Jolla, California.

Marshall, Richard E., Role of vitamin B₁₂ in the biosynthesis of methionine. Under Herbert Weissbach, National Heart Institute, National Institutes of Health, Bethesda, Maryland.


Their, Samuel, Renal tubular transport defect in cystinuria. Under Alexander Leaf, Massachusetts General Hospital, Boston, Massachusetts.

Villamil, Mario F., Sodium distribution in the artery wall in normal conditions and in experimental hypertension. Under Charles R. Kleeman, Mount Sinai Hospital Division, Cedars-Sinai Medical Center, Los Angeles, California.


Weinstein, Ira, Relationship of amino acids and proteins to lipid transport and metabolism in adipose tissue and liver. Under Benjamin Shapiro, Hebrew University School of Medicine, Jerusalem, Israel.

Wolf, George, Central neural mechanisms of body sodium regulation. Under Jerome Sutin, Yale University School of Medicine, New Haven, Connecticut.
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Professor of Medicine; Chief, Division of Cardiology; Director, Cardiopulmonary Laboratories, West Virginia University School of Medicine, Morgantown, West Virginia.

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Chief, Medical Service and Cardiology Section, Veterans Administration Hospital and Clinical Professor of Medicine, University of Puerto Rico School of Medicine, San Juan, Puerto Rico.

Elliot Rapaport, M.D.
Associate Professor of Medicine and Member of the Staff, Cardiovascular Research Institute, University of California Medical School; Director, Cardiopulmonary Unit, San Francisco General Hospital, San Francisco, California.

A. E. Rodin, M.D., M.Sc. (Med.), F.R.C.P. (C)
Assistant Professor of Pathology, The University of Texas Medical Branch, Galveston, Texas.

Mohinder P. Sambhi, M.B., B.S., M.Sc.
Research Associate, University of Southern California School of Medicine, Department of Medicine, Los Angeles, California. Established Investigator, Los Angeles County Heart Association.

Charles A. Sanders, M.D.
Assistant in Medicine, Massachusetts General Hospital and Harvard Medical School; Chief, Cardiac Catheterization Unit, Massachusetts General Hospital, Boston, Massachusetts.

I. Alberto Sandler, M.D.
Fellow in Cardiology, Cardiology Center, Tampa General Hospital, Tampa, Florida.

J. Gordon Scannell, M.D.
Assistant Clinical Professor of Surgery, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts.

Herbert J. Semler, M.S., M.D.
Director, Cardiac Telemetry Station, St. Vincent Hospital; Clinical Instructor, Department of Medicine, Division of Cardiology, University of Oregon Medical School, Portland, Oregon.

Stanley R. Shane, M.D.
Senior Resident Physician, Department of Medicine, West Virginia University School of Medicine, Morgantown, West Virginia.

Warren T. Sherman, M.D.
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