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PROCEEDINGS OF THE FIFTY-FIFTH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR CLINICAL INVESTIGATION, INC., HELD IN ATLANTIC CITY, N. J., APRIL 29, 1963

PRESIDENTIAL ADDRESS

By JOHN P. MERRILL

In perusing the archives of the Society in preparation for my address, I have noted that a considerable amount of thought and effort has been devoted from this rostrum to the problem of what constitutes a clinical investigator. I propose, therefore, to address myself not to the problem of what constitutes a clinical investigator, but to a discussion of what constitutes a Society for Clinical Investigation.

Let me confess at the outset, however, that I have an angle. Every essay has an angle, I suppose, but if its message is straightforward the essayist is forgiven. My thesis is simple; it is very much the same as that Doctor Starr propounded here almost twenty-five years ago, but it has perhaps the merit of being elaborated in a somewhat different environment. Over the past several months, I have tried to visualize the structure of a society that might best further the purpose of clinical investigation. I am forced to the shocking and perhaps sad heresy that the image which I have constructed resembles very little our Society as it is constituted today. In part, of course, this may be due to rather recent developments in the field of clinical investigation and particularly in its support. I have wondered, however, whether perhaps the image, or the Society, or both might not be tailored to more resemble one another. My approach is not new. Over the years changes have been proposed, discussed, and occasionaly implemented. Traditionally, our stance has been somewhat conservative. Shortly after my election to this office, and somewhat overwhelmed by its potential, I asked one of the elder statesmen of the Society whether he had any words of guidance for me. He did and they were brief: "Don't rock the boat," he said. From the vantage point of a year of experience as President, I am not sure that this advice is correct. The winds of change are blowing; the boat can and should rock; the important thing is that it remain upright when the storm subsides.

One function of our Society is to provide an environment in which clinical investigation can thrive. This can be done by example, by measurement against an exacting standard as in the selection of papers and candidates. But I believe that the increasing complexity of the environment in which clinical investigation is accomplished requires something more than standards of scientific excellence. One other obvious requirement is money. For many of us this is a necessary nuisance like taxes and parking meters. It always seems to be forthcoming if the work is good, and at the worst requires only a few hours of tedious paper work. Most of us believe we have been engaged in an honest endeavor whose luster should not be tarnished by the fetor of the dollar. All of us subscribe to the tenet that the investigator should be unfettered, that his direction should not be prescribed by purely bookkeeping considerations; yet in our parroting of this dictum, have we perhaps forgotten that our research is conducted in the midst of a world of bookkeepers? The era of Liebnitz is gone. As scientists, we can no longer exist or progress without some consideration of the beliefs and conduct of others. Have we perhaps forgotten that this applies not only to our scientific but to our fiscal conduct as well? The report of the Fountain Committee and the recent revision of the policies regulating grants from the National Institutes of Health suggest that some of us have, without question, forgotten. The events leading to these hearings and the sharply critical tone of the report have been in part our fault. As responsible investigators, some of us have failed to be "responsible" in the total sense of the word.

Restrictive legislation governing the conduct of the medical profession is nothing new. Hammurabi, who ruled Babylon almost 4,000 years ago, formulated a code that contained detailed regulations restricting medical practice. This ancient lineage does not necessarily prove the importance of the idea, but it does at least suggest durability, and from this we might draw a lesson. Have we as a Society of Clinical Investigation done anything to correct or to explain misunderstanding between the grantor and grantee? I think not. Now it is being done for us and less well than we like. Here, then, is an additional role that the Society might play, to formulate and express an opinion as to the adequacy of grant award policies insofar as they affect clinical investigation. I believe we should do this now, as a group, speaking with a forceful voice for clinical investigation. We should recognize the errors that have been made, but should add our weight to the eloquent statements by the leaders of the National Institutes of Health with regard to the fundamental integrity of the investigator. This kind of frank appraisal must certainly be more effective in circumventing future restrictive legislation than strenuous protest alone. Having put our own house in order, we have as a group the experience and authority to point out clearly that the money needed to enforce and administer needless restrictions is money lost to productive research.

This role that I visualize for us has been frequently

debated. Like the road to hell, the path that the Society has followed is paved with the good intentions of members convinced that the Young Turks should do more than elect members and present papers. The difficulty is that this kind of activity takes time. It takes time particularly if the Society as a whole is to be involved and the Society as a whole *must* speak rather than its Council alone. Otherwise the voice has no force. Such time, it might be argued, is better spent in the laboratory or at the bedside. We are all so busy keeping afloat in the current of events that we have little time to consider where that current might be taking us. Like Isaac Newton, we concentrate our attention on the pebbles at the seashore while the great ocean of truth lies all undiscovered before us. And yet I wonder at this point if our time might not be equally well spent, not only with the problems immediately before us, but with those that involve all of us as investigators and as a Society. Who has more of a mandate and obligation to do this than we whose purpose is to "further clinical investigation in all of its aspects"?

It is the conclusion of a spokesman for one of the Federal Granting Agencies that, "A set of terms and conditions which permits a productive relationship between the Federal Government and the Universities without distorting the role or responsibilities of either party must be forged. Representatives of universities and the scientific community must find a way to effectively participate in the political and democratic process in which these issues and concepts will inevitably be resolved." I submit to you that our Society constitutes a means to effectively participate.

This is only one of a number of questions that have recently been brought into focus, nor are they rhetorical questions. This and others have been considered by the Council, and recommendations for action will be made to the membership at the Business Meeting. For those of you who question the fact that serious thought need be given to these matters by our Society, I recommend to you the unfortunate saga of the American Institute of Biological Sciences.

I come now to two other functions of the Society that have created some heat over the years. First, the election of new members. As many of you will remember, the size of the incoming delegation was discussed, researched, and argued with vigor. In numbers alone, this problem has at least temporarily been resolved. The wisdom of the Council in any particular instance continues to generate energy that seems to near critical mass. In all seriousness, having lost some sleep over these matters with the Council, I am convinced that this body does perform as conscientious, as thorough, and as effective a job as is possible under the circumstances. It is interesting to note, however, the opinions of occasional sponsors and proponents who have expressed their unshakable conviction that the whole rotten structure of the Society will collapse like the battered caravanserai of Omar the tent maker unless it is shored up by the strength of their candidates. Dr. Ernest Craige has

FIGURE 1

constructed from some of these letters a composite picture of the deliberations of the Council during the process of candidate screening (Figure 1). Some of you will recognize, perhaps, a similarity between these figures and those of one or two of the Councillors known to you as they hunch over their gin and water. I think it is possible that at one time or another, either individually or collectively, officers of the Society have bent over a glass of spirits, but on the whole the picture is inaccurate.

A second area in which real problems exist is the selection of papers for the scientific program. This has largely been the responsibility of the President of the Society. The process has seemed a little arbitrary to some. Several of the papers, perhaps, have been presented before. Others represent work done by the President's relatives. As you may know, the abstracts are first sent to the Secretary, who assigns them a number and forwards them to the President; the latter, with the aid of the Chairmen of the Sections, then selects papers for the general program. This sketch (Figure 2) shows the

Courtesy of Grosset & Dunlap, Inc.

FIGURE 2

President and the Chairman of the Kidney Section deciding whether abstract no. 7 has more merit than abstract no. 11. One can see dimly between them the author of an abstract that has been rejected. This has happened to him three years in a row. As you can perceive, he is disappointed and unhappy, and tomorrow will write a letter to the Editor of Clinical Research criticizing the process by which the program is selected.

I should like to close on a more serious note. Both the selection of candidates and abstracts are conscientiously done and at the expense of much time and thought on the part of a good many people. Moreover, they are constantly being criticized and re-evaluated. However, I believe that the mission of the American Society for Clinical Investigation encompasses more than the setting of standards for investigators and that at no time in its history has the climate been more propitious for the practical realization of this belief.

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PAPERS PRESENTED AT THE FIFTY-FIFTH ANNUAL MEETING 1963

1. Chronology and Pattern of Human Chromosome Replication. Y. KIKUCHI and AVERY A. SANDBERG,* Buffalo, N. Y. (947)
2. Enhanced Mutagenicity of Virus-bound Carcinogens. CHRISTOPHER M. MARTIN and DEAN F. GRAY, Jersey City, N. J. (introduced by Harry J. Robinson). (956)
3. Neonatal Unconjugated Hyperbilirubinemia Associated with Breast-Feeding and a Factor in Milk That Inhibits Glucuronide Formation *In Vitro*. IRWIN M. ARIAS, LAWRENCE M. GARTNER, SAM SEIFTER, and MATHILDA FURMAN, New York, N. Y. (introduced by M. Henry Williams, Jr.). (913)
4. The Distinctive Detergent Properties of Conjugated Bile Salts and Their Relation to the Role of Bile Salts in Fat Digestion. ALAN F. HOFMANN and BENGT BORGSTRÖM, New York, N. Y., and Lund, Sweden (introduced by Jules Hirsch). (942)
5. Important Determinants in Resistance to Pulmonary Infection. GUSTAVE A. LAURENZI, RAUL B. ENDRIGA, JOSEPH J. GUARNERI, and JOHN P. CAREY, Jersey City, N. J. (introduced by Timothy J. Regan). (949)
6. Infection of Volunteers with Artificially Propagated Eaton Agent (*Mycoplasma Pneumoniae*): Implications for Development of Attenuated Vaccine for Cold Agglutinin Positive Pneumonia. R. B. COUCH, T. R. CATE, and R. M. CHANOCK,* Bethesda, Md. (927)
7. The Ability of Different Donor Cell Constituents to Shorten or Prolong Homograft Survival. HALSTED HOLMAN,* ALEXANDER FEFER, and WILLIAM C. DAVIS, Palo Alto, Calif. (943)
8. Evolution of Delayed Hypersensitivity Observed in the Electron Microscope with Ferritin-conjugated Tuberculin Antigen. WALTER L. NORTON and MORRIS ZIFF,* Dallas, Tex. (960)
9. Identification of Complement Antigens Coating Red Cells in Acquired Hemolytic Anemia. H. J. MÜLLER-EBERHARD,* H. FUDENBERG, M. HARBOE, and P. L. MOLLISON, New York, N. Y. (958)
10. A Mechanism of Viruria. C. LARKIN FLANAGAN and IRWIN SCHULTZ, Chicago, Ill. (introduced by David P. Earle). (931)
11. Hypoglycemia: Potent Stimulus to Growth Hormone Secretions. SEYMOUR M. GLICK, JESSE ROTH, ROSALYN S. YALOW, and SOLOMON A. BERSON,* Bronx, N. Y. (935)
12. Evidence for a Stimulatory Feedback of Ketone Acids on Pancreatic Beta Cells. LEONARD L. MADISON,* DAVID MEBANE, and AMANDA LOCHNER, Dallas, Tex. (955)
13. The Relationship between Vitamin D and Parathyroid Hormone. HOWARD RASMUSSEN,* HECTOR F. DELUCA, JOHN D. SALLIS, and GEORGE W. ENGSTROM, Madison, Wis. (967)
14. Steroid-dependent Increase of Nerve Conduction Velocity in Adrenal Insufficiency. R. I. HENKIN, J. R. GILL, JR., J. R. WARMOLTS, A. A. CARR, and F. C. BARTTER,* Bethesda, Md. (941)
15. A Role of Mitochrondria in Iron Metabolism of Developing Erythrocytes. RICHARD G. COOPER, LESLIE T. WEBSTER, JR., and JOHN W. HARRIS,* Cleveland, Ohio. (926)
16. Intestinal Mucosal Mechanisms Controlling Iron Absorption. MARCEL E. CONRAD and WILLIAM H. CROSBY,* Washington, D. C. (926)
17. Endogenous Carbon Monoxide Production in Patients with Hemolytic Anemia. R. F. COBURN, W. J. WILLIAMS,* S. B. KAHN, and R. E. FORSTER,* Philadelphia, Pa. (924)
18. Sonic Measurement of Bone Mass. CLAYTON RICH, ELI J. KLINK, GAY L. MULLINS, and C. BENJAMIN GRAHAM, Seattle, Wash. (introduced by Belding H. Scribner). (970)
19. Physiologic Studies of Antidiuretic Hormone (ADH) by Its Direct Measurement in Human Plasma. WALTER J. CZACZKES and CHARLES R. KLEEMAN,* Los Angeles, Calif. (927)
20. Augmented Natriuretic Response to Acute Sodium Infusion Following Blood Pressure Elevation with Metaraminol in Normotensive Subjects. CARLOS A. VAAMONDE, I. NORMAN SPORN, RUBEN G. LANCESTREMERE, JOSEPH L. BELSKY, and SOLOMON PAPPER,* Boston, Mass., Richmond, Va., and Albuquerque, N. Mex. (988)
21. The Mechanism of Sodium Diuresis after Saline Loading: Evidence for a Factor Other than Increased Filtered Sodium and Decreased Aldosterone. NORMAN G. LEVINSKY and RICHARD C. LALONE, Boston, Mass. (introduced by Chester S. Keefer). (951)
22. Circulatory Consequences of Changes in Cardiac Rhythm Produced in Patients by Transthoracic Direct-Current Shock. JOHN S. GRAETTINGER, RICHARD A. CARLETON, and JOSEPH J. MUENSTER, Chicago, Ill. (introduced by Theodore B. Schwartz). (938)
23. Fine Structural Basis of Starling's Law of the Heart. EDMUND H. SONNENBLICK, THOMAS S. COTTRELL, and DAVID SPIRO, New York, N. Y. (introduced by John V. Taggart). (981)
24. The Diagnosis of Myocardial Infarcts by Photoscanning after Administration of Cesium^{131}. EDWARD A. CARR, JR., BARBARA J. WALKER, and JOHN BARTLETT, JR., Ann Arbor, Mich. (introduced by Fred M. Davenport). (922)
25. Potassium Depletion—A Disorder of the Pasteur Effect. ROBERT P. DAVIS and GLADYS F. RAND, New York, N. Y. (introduced by Quentin B. Deming). (928)
26. Evidence for Active Transport Regulation of Cerebrospinal Fluid pH and Its Effect on the Regulation of Respiration. J. W. SEVERINGHAUS* and R. A. MITCHELL, San Francisco, Calif. (977)

* Member of ASCI.
Number in parentheses indicates page number of abstract.

SECTIONAL MEETINGS

Section I: INFECTIOUS DISEASE, IMMUNOLOGY, AND CONNECTIVE TISSUES

1. Distinguishing Characteristics of Reovirus and Its RNA. P. J. GOMATOS and I. TAMM,* New York, N. Y. ASCI (936)
2. Immunologic Kinetics in Man. N. COSTEA, F. B. LEWIS, and R. S. SCHWARTZ, Boston, Mass. AFCR
3. Natural Opsonins to Group A *Streptococci* and *Staphylococci* in the Sera of Germ-free Mice and Colostrum-deprived Piglets. G. H. STOLLERMAN,* R. EKSTEDT, R. FRIEDENBURG, and I. COHEN, Chicago, Ill. ASCI (985)
4. Rheumatic Recurrences and Clinical Features of Streptococcal Infections in a Large Out-patient Population. A. R. FEINSTEIN, M. SPAGNUOLO, H. F. WOOD, A. TARANTA, E. TURSKY, and E. KLEINBERG, New York, N. Y. AFCR
5. Biochemical Lesion of Diphtheria Toxin in the Heart. B. WITTELS and R. BRESSLER, Durham, N. C. (introduced by G. P. Kerby). ASCI (995)
6. The Behavior of Candida Cells within Leukocytes. D. B. LOURIA and R. G. BRAYTON, New York, N. Y. AFCR
7. Staphylococcal Infections in Chick Embryos. W. R. MCCABE, Chicago, Ill. (introduced by M. H. Lepper). ASCI (953)
8. Loss of Endotoxin Tolerance in Familial Mediterranean Fever. S. H. WOLFF, Bethesda, Md. AFCR
9. The Typhoid Carrier State: Quantitative Bacteriology and Preliminary Results of Therapy. J. G. MERSELIS, JR., D. KAYE, C. S. CONNOLLY, and E. W. HOOK,* New York, N. Y. ASCI (956)

Section II: ENDOCRINOLOGY AND METABOLISM

1. Mechanism of the Effect of Calcium Concentration on the Parathyroids. LAWRENCE G. RAISZ, Rochester, N. Y. AFCR
2. The Use of Sodium Fluoride in Metabolic Bone Disease. DANIEL S. BERNSTEIN, CHARLES GURI, PHIN COHEN, JOHN J. COLLINS, and SPYROS TAMVAKOPOULOS, Boston, Mass. (introduced by Francis D. Moore). ASCI (916)
3. Pathways of Transport and Metabolism of C^{14}-Vitamin D_2 in the Rat. DAVID SCHACHTER,* JAMES D. FINKELSTEIN, and SZLOMA KOWARSKI, New York, N. Y. ASCI (974)
4. The Major Human Pathway of Thyroxine Catabolism. JAMES WYNN, Durham, N. C. AFCR
5. Hyperdesoxycorticosteronism with Hypokalemic Alkalosis and Edema. EDWARD G. BIGLIERI, San Francisco, Calif. (introduced by Peter H. Forsham). ASCI (917)
6. Studies on the Mechanism of Enhancement of Protein Synthesis by Estradiol. JEAN D. WILSON, Dallas, Tex. (introduced by Marvin D. Siperstein). ASCI (994)
7. Immediate Adipokinetic Effects of Corticotropin in the Intact Mouse. HAROLD E. LEBOVITZ and FRANK L. ENGEL, Durham, N. C. AFCR
8. Studies on the Mechanism of Diet-induced Alterations of Plasma Cholesterol. NORTON SPRITZ, SCOTT GRUNDY, and EDWARD H. AHRENS, JR.,* New York, N. Y. ASCI (981)

Section III: KIDNEY

1. Antidiuretic Hormone (ADH) Metabolism in the Adrenal Insufficient Patient with Impaired Water Diuresis. CHARLES R. KLEEMAN, WALTER J. CZACZKES, and RALPH CUTLER, Los Angeles, Calif. AFCR
2. A Vasoconstrictor Effect of Plasma during Salt Depletion. BERTRAM WINER, Boston, Mass. (introduced by Milton W. Hamolsky). ASCI (994)
3. Angiotensin Concentrations in Plasma of Sodium-depleted Humans. PATRICK J. MULROW,* NANCY A. POWELL, and RICHARD L. KAHLER, New Haven, Conn. ASCI (959)
4. Renomedullary Vasodepressor Factor. ROGER B. HICKLER, CALVIN A. SARAVIS, JAMES F. MOWBRAY, DAVID P. LAULER, ANTHONY J. VAGNUCCI, and GEORGE W. THORN,* Boston, Mass. ASCI (942)
5. Serum Factor in Renal Compensatory Hyperplasia. LEAH M. LOWENSTEIN, Boston, Mass. AFCR
6. Renal Biopsy in Infectious Hepatitis. F. D. SCHWARTZ, M. E. CONRAD, JR., and A. A. YOUNG, Washington, D. C. AFCR
7. Micropuncture Study of Experimental Tubular Necrosis. WILLIAM J. FLANIGAN, RAJA N. KHURI, and DONALD E. OKEN, Boston, Mass. (introduced by Kendall Emerson, Jr.). ASCI (932)
8. Potassium Reabsorption in the Proximal Tubule of the Dog Nephron. JOHN F. WATSON and JAMES R. CLAPP, Bethesda, Md. (introduced by Robert Berliner). ASCI (990)
9. Micropuncture Study of the Potassium Concentration in Proximal Tubule Using Glass Electrode. RAJA N. KHURI, WILLIAM J. FLANIGAN, and DONALD E. OKEN, Boston, Mass. AFCR

Section IV: ELECTROLYTES

1. Micropuncture Study of the Roles of the Proximal Tubule, Distal Tubule, and Collecting Duct in the Acidification of Urine. H. ALLAN BLOOMER, FLOYD C. RECTOR, JR.,* and DONALD W. SELDIN,* Dallas, Tex. ASCI (917)
2. A Micropuncture Study of Renal "Bicarbonate" and Chloride Transport in Metabolic Alkalosis. N. BANK and H. S. AYNEDJIAN, New York, N. Y. AFCR
3. Renal Tubular Reabsorption of Alkaline Earths. W. J. RAHILL, B. H. B. ROBINSON, and M. WALSER, Baltimore, Md. AFCR
4. Phosphate Transport by Suspensions of Tubules from Rat Kidney Cortex. LEONARD A. MOROZ and STEPHEN M. KRANE, Boston, Mass. (introduced by Marian W. Ropes). ASCI (958)

5. Lack of Coupling between the Active Efflux of Sodium and the Influx of Potassium in Rabbit Renal Tubules. MAURICE B. BURG, EVELYN F. GROLLMAN, and JACK ORLOFF,* Bethesda, Md. ASCI (921)
6. On the Electrogenic Nature of Active Sodium Transport across the Isolated Frog Skin. NEAL S. BRICKER* and SAULO KLAHR, St. Louis, Mo. ASCI (920)
7. The Differential Effects of Na^+ and K^+ on Active and Nonactive Membrane Transport in Striated Muscle. JAMES E. PARRISH and DAVID M. KIPNIS,* St. Louis, Mo. ASCI (963)
8. Effect of Aldosterone on the Sodium Content of the Kidney. E. KESSLER, R. ALLEN, D. KIRMAN, and H. STRAUSS, East Orange, N. J. AFCR
9. Studies on the Biological Action of Aldosterone *In Vitro*. GEOFFREY W. G. SHARP and ALEXANDER LEAF,* Boston, Mass. ASCI (978)
10. Relationships between Steroid Structure and Action on Active Sodium Transport, *In Vitro*. G. A. PORTER and I. S. EDELMAN,* San Francisco, Calif. ASCI (965)

Section V: GASTROENTEROLOGY

1. Deficiency of Thiamine Pyrophosphate Apoenzyme in Liver Disease. JAMES J. FENNELLY, HERMAN BAKER, OSCAR FRANK, and CARROLL M. LEEVY, Jersey City, N. J. AFCR
2. Effect of Serotonin on Glycogen and Blood Flow in the Isolated Perfused Rat Liver. ROBERT A. LEVINE, LEROY A. PESCH, GERALD KLATSKIN, and NICHOLAS J. GIARMAN, New Haven, Conn. AFCR
3. Effects of Ethanol on the Liver: Evidence for the Preferential Synthesis of Triglycerides. ROBERT L. SCHEIG and KURT J. ISSELBACHER,* Boston, Mass. ASCI (975)
4. Identification of a "Primitive" Bile Acid in Man as an Intermediate in the Transformation of Cholesterol to Cholic Acid; a Biochemical Sign of Human Evolution. JAMES B. CAREY, JR., Minneapolis, Minn. (introduced by C. J. Watson). ASCI (921)
5. Intestinal Absorption and Malabsorption of the Amino Acid Analogue Alpha-aminoisobutyric Acid in Man. LEONARD LASTER and D. M. MATTHEWS, Bethesda, Md. (introduced by Jan Wolff). ASCI (948)
6. An Immunologic Method for Measuring Human Serum Albumin (HSA) in the Stool. ARTHUR H. GALE and RICHARD S. FARR, La Jolla, Calif. AFCR
7. The Effect of Gastrin on Gastric Histamine in the Rat. BERNARD J. HAVERBACK, MURRAY COHEN, LAILEE B. TECIMER, DAPHNE HUI, and BARBARA DYCE, Los Angeles, Calif. AFCR
8. The Role of the Phrenicoesophageal Ligament in the Lower Esophageal Sphincter. CHARLES I. SIEGEL and ELLIOTT MICHELSON, Baltimore, Md. (introduced by Leighton E. Cluff). ASCI (980)

Section VI: HEMATOLOGY

1. Mechanism of Macrocytic Response to Erythropoietin. FREDERICK STOHLMAN, JR., ANTOINETTE BELAND, and DONALD HOWARD, Boston, Mass. ASCI (984)
2. Lactic Acidosis in Acute Leukemia. M. FIELD, J. B. BLOCK, and D. F. RALL, Bethesda, Md. AFCR
3. Inhibition of the Phagocytic Capacity of the Human Reticuloendothelial System in Viral Infections. HENRY N. WAGNER, JR.,* MASAHIRO IIO, and RICHARD B. HORNICK, Baltimore, Md. ASCI (990)
4. Characterization of the Mechanism of Hemolysis of Human Erythrocytes by Antibody and Complement. DAVID A. SEARS, ROBERT I. WEED, and S. N. SWISHER, Rochester, N. Y. AFCR
5. Expanded Autohemolysis as an Investigative and Diagnostic Tool in Hemolytic Disorders. ERNEST R. SIMON, Seattle, Wash. AFCR
6. Protein Synthesis in Human Reticulocytes: A Defect in Thalassemia Major. EDWARD R. BURKA and PAUL A. MARKS,* New York, N. Y. ASCI (921)
7. Studies on the Site of Action of a Circulating Anticoagulant in Disseminated Lupus Erythematosus. ROBERT T. BRECKENRIDGE and OSCAR D. RATNOFF, Cleveland, Ohio. AFCR
8. Sequestration of Human Platelets. RICHARD H. ASTER and JAMES H. JANDL, Boston, Mass. AFCR

Section VII: CARDIOPULMONARY

1. The Coefficient of Retraction—A Useful Method for Assessing Pulmonary Elasticity. DONALD P. SCHLUETER and WILLIAM W. STEAD,* Milwaukee, Wis. ASCI (975)
2. Reflex Pulmonary Vasoconstriction Induced by Aortic Body Stimulation. SHLOMO STERN, RICHARD E. FERGUSON, and ELLIOT RAPAPORT*, San Francisco, Calif. ASCI (984)
3. Aspirin and Peripheral Circulatory Responses to Catecholamines and Angiotensin. E. A. STROM and J. D. COFFMAN, Boston, Mass. AFCR
4. Plasma Vasoactive Amines and Monoamine Oxidase during Extracorporeal Circulation in Man. MAX JELLINEK, THEODORE COOPER, VALLEE L. WILLMAN, JOHN L. SCHWEISS, and C. ROLLINS HANLON, St. Louis, Mo. AFCR
5. Antagonism of the Contractile Effect of Digitalis by EDTA in the Normal Human Ventricle. SIDNEY COHEN, CLYDE D. SCHOENFELD, ARNOLD M. WEISSLER, and JAMES V. WARREN,* Columbus, Ohio. ASCI (924)
6. Measurement of Ventricular Dimensions in Assessing Drug Action on the Human Heart. GERALD GLICK, DONALD C. HARRISON, ALAN GOLDBLATT, and EUGENE BRAUNWALD,* Bethesda, Md. ASCI (935)
7. Myocardial Water Shifts Induced by Coronary Arteriography. PATRICK H. LEHAN, MAUREEN A. HARMAN, and HENRY A. OLDEWURTEL, Jersey City, N. J. (introduced by Harper K. Hellems). ASCI (950)
8. Myocardial Blood Flow Measurement by the Injection of Radioactive Gases Directly into Coronary Arteries. RICHARD S. ROSS,* KEIJI UEDA, PAUL R. LICHTLEN, and J. RUSSELL REES, Baltimore, Md. ASCI (972)
9. Measurement of Aortic Regurgitation by Indicator Dilution Using Continuous Dye Infusion. M. J. FRANK, G. E. LEVINSON, P. CASANEGRA, and H. K. HELLEMS, Jersey City, N. J. AFCR