tion que le patiente qui veni al operation con un
corde al limite superior o supra le limite superior
del normal dimensiones cardiac.

Le absentia de un murmure continue indica
in general que le anastomose ha cessate
functionar.

Le riso de subacute endocarditis bacterial es
real sed non grande. Illo amonta a circa 6 pro
cento intra 5 a 8 annos post le operation.

Un patiente con tetralogy de Fallot non dis-
velopps progressive allargamento cardiac post
anastomose Blalock-Taussig.

Patientes in qui le numeration erythrocytic
remane infra 6,5 milliones, le hemoglobina infra
17 g, e le hematocrite infra 55 pro cento ha
excellentee prognoeses a longe durantia. Pa-
tientes qui satisface iste criterios e qui ha
tetralogy de Fallot e un proportion cardio-
thoracic de 50 pro cento es distinguite per spe-
cialmente bon prognoeses.

REFERENCES
1 Blalock, A., and Taussig, H. B.: The surgical
treatment of malformations of the heart in
which there is pulmonary stenosis or pulmonary
2 —: Technique of creation of artificial ductus ar-
teriosus in treatment of pulmonary stenosis. J.
Thoracic Surg. 16: 244, 1947.
3 Taussig, H. B., King, J. T., Bauersfeld, R.,
and Padmavati-Iyer, S.: Results of operation
for pulmonary stenosis and atresia (report of
4 — and Bauersfeld, S. R.: Follow-up studies on
the first 1000 patients operated on for pulmonary
stenosis or atresia (Results up to March 1952).

Medical Eponyms

By Robert W. Buck, M.D.

Roger's Disease. Henri Roger (1811–1892) presented his "Clinical Studies of Congenital Com-
munication between the Two Sides of the Heart by Reason of Patency of the Interventricular
Septum" (Recherches cliniques sur la communication congénitale des deux cœurs, par inocclusion du
septum interventriculaire) at the meeting of the French Academy of Medicine on October 21, 1879.
The paper was published in the Bulletin de l'Academie de Medecin 8 (2nd series): 1074–1092,
1879.

"There is a malformation of the heart unaccompanied by cyanosis, in spite of the communication
between the ventricles and in spite of the free admixture of venous and arterial blood; this mal-
formation, which is compatible with life and even with prolonged existence, is simple and is not
accompanied by pulmonary stenosis; it consists in patency of the septum between the ventricles. . . .

"It is revealed only by auscultation and shows itself by a physical sign with quite distinctive
characteristics: this is a loud, prolonged whirring sound; it is a single murmur, beginning with systole
and continuing in such a way as to entirely mask the normal rhythm; its maximum intensity is
not at the apex . . . or at the right or left side of the base . . . but over the upper third of the pre-
cordial region; it is central like the septum itself, and diminishes gradually from this central point
the farther from it one listens; it is not transmitted; it corresponds to no other sign of organic
disease except the purring thrill. An abnormal murmur which combines these characteristics is the
pathognomonic sign of patency of the ventricular septum."
trava alterationes que poteva esser interpre-
tate como manifestationes de cicatrisation
apical o lateral, e 5 esses considerate como
normal. Super le base del restringite datos del
presente studio, il pare que le casos in que le
electrocardiogrammas de routine suggere le
presentia de cicatrisation apical o lateral es le
sol casos in que il pote esser indicate obteni-
derivationes additional ab le portion supero-
sinistre del precordio o ab le axilla sinistre.

Esseva incontrate 2 casos de curate in-
farcimento latero-posterior con signos electro-
cardiographic de bloco postinfarcimental.

Un sol caso de acute infarcimento sub-
endocardial del pariete lateral del ventriculo
sinistre in combination con ancian infarcimento
transmural anteroseptal e bloco de branca
sinistre offereva un base pro le evaluation de
currentemente acceptate notiones in re bloco
de branca e le consequencias electrocardio-
graphic de superimponite infarcimento myo-
cardial.

Un alteration del configuration de QRS que
es restringite a lesiones del pariente lateral (in
contrastro con infarcimentos myocardial de
alte locationes) es un augmento de elevation
del deflexion R in derivationes precordial
centrata circa le position 1. Le valor diagnostic
de iste constatation es reducere per le facto que
il se tracta de un alteration quantitative plus
tosto que qualitative.

Infarcimentos del pariete lateral del ventri-
culo sinistre, specialmente in lor phases acute,
non es electrocardiographicamente "silente,"
sed lor voce ha solmente sonos que es debile e
miscite.

REFERENCES

1 Wood, F. C., Wolferth, C. C., and Bellet, S.: In-
farcion of the lateral wall of the left ven-
tricle: Electrocardiographic characteristics. Am.
Heart J. 16: 387, 1938.

2 Thomson, H. W., and Feil, H.: Infarcion of the
lateral wall of the left ventricle: Pathologic and
electrocardiographic study. Am. J. M. Sc. 207:
588, 1944.

3 Myers, G. B., Klein, H. A., and Stofer, B. E.: Cor-
relation of electrocardiographic and patho-
logic findings in lateral infarcion. Am. Heart J.

4 Shaffer, C. F.: Electrocardiographic study of
lateral infarcion, proved at autopsy. Am. Heart
J. 28: 39, 1944.

5 Rosenbaum, F. F., Wilson, F. N., and Johnston,
F. P.: The precordial electrocardiogram in high
lateral myocardial infarcion. Am. Heart J.
32: 135, 1946.

6 Hecht, H. H.: The localization of myocardial
infarcta with particular reference to lateral
infracion and to the T1 Q2 pattern. Proc. Am.

7 Achor, R. W. P.: The fate of patients who have
survived acute myocardial infarcion. Thesis,
Graduate School, University of Minnesota, 1953.

8 Burchea, H. B., and Pruitt, R. D.: The value of
the esophagal electrocardiogram in the
elucidation of postinfarcion intraventricular

The Foxglove is a plant sufficiently common in this island, and as we have but one species, and
that so generally known, I should have thought it superfluous either to figure or describe it; had I
not more than once seen the leaves of Mullein gathered for those of Foxglove. On the continent of
Europe too, other species are found, and I have been informed that our species is very rare in some
parts of Germany, existing only by means of cultivation, in gardens.

Our plant is the Digitalis purpurea of Linnaeus. It belongs to the 2d order of the 14th class,
or the Didynamia Angiospernia. The essential characters of the genus are, Cup with 5 divisions.
Blossom bell-shaped, bulging. Capsule egg-shaped, 2 celled.—William Withering. An Account
of the Foxglove, and Some of Its Medical Uses. Brimingham, 1785.
mas registrate ab oscilloscopes a radios cathodic. Le possibile utilitare clinic de iste typo de information esseva illustrate per certes del registrationes ab patientes con infarcimento myocardial in qual registrationes le incisiones del curvas de magnitude esseva plus marcate que in casos normal.

In le registrationes anormal, le characteristicas electrocardiographic que possede un cognoscite signification clinic esseva representate in le curvas super scalas linear de tempore in formas facile a recognoscer.

Registrationes obtenite per medio del sistema de referentia de un tetrahedron equilateral esseva qualitativamente simile al registrationes obtenite per medio de un “corrigite” methodo de placimento electrodic. Le registrationes obtenite per medio del ultime-mente mentionate sistema exhibiva minus extense variationes quantitative que le registra-tiones obtenite per medio del tetrahedron.

REFERENCES


Blood letting is traced in this article from antiquity to the present. The author points out the uses at present for venesection: treatment for polycythemia vera, exchange transfusion for erythroblastosis fetalis, emergency treatment for acute pulmonary edema, and possible prophylactic treatment for severe hypertension and threatened apoplexy. The author refers to ancient medicine and traces the development of the blood letting techics, and the subsequent medical concepts that evolved from these techics. This story is a rather exciting one from a historical standpoint and is well recorded and documented. An amazing fact is the persistence of blood letting into the modern medical era as a popular method of treatment.

Harvey


The study reported is based upon an analysis of 82 cases of ventricular aneurysm occurring in Johannesburg. Of the total, 65 were European, 15 Negro, one Cape Coloured and one Hottentot. Postmortem studies were made in 74 and in this series gross atherosclerosis, calcification, ulceration or thrombosis of the coronary vessels with myocardial fibrosis and a frequent history of coronary insufficiency during life were characteristic of each of the 57 European cases and yet were absent in all of the Bantu cases. Gross coronary atherosclerosis was present in the single Coloured and Hottentot patients. Of the 15 Bantu cases 6 were due to syphilis; one each were due to tuberculosis, Loeffer's parietal endocarditis, rheumatic myocardial necrosis, mycotic extension of subacute bacterial endocarditis and congenital myocardial defect. In general most of the aneurysms were large, ranging from ½ inch in width to 4 inches in diameter with a depth of 2½ inches. Pericardial adhesions were present in 36 cases with rupture of the aneurysms occurring in 6 of the postinfarctional cases and 10 of the miscellaneous group occurring in the Bantu. In only 1 case was the rupture due to a recent coronary occlusion. In the Europeans, the aneurysms were most commonly located in the apex of the left ventricle whereas in the Bantu, the posterior wall was usually involved; this finding was felt to reflect the difference in etiology and pathology of the aneurysm in the two races. The majority of the Bantu cases died in the fourth decade, whereas the majority of the Europeans died in the seventh decade.

The virtual absence of coronary artery atheroma in the cases of ventricular aneurysm in the Bantu was felt to conform with other observations concerning the rarity of myocardial infarction due to coronary thrombosis in that race.
ANNUAL MEETING AND SCIENTIFIC SESSIONS

This issue of Circulation includes a complete listing of the titles and authors of papers to be presented as well as information about films, exhibits and special features of the 29th Scientific Sessions of the Association. The Scientific Sessions will be held in conjunction with the 32nd Annual Meeting of the Association in Cincinnati. The entire program, which is scheduled for the Music Hall and the Netherland Hilton Hotel, will extend from Friday evening, October 26, through Friday morning, November 2.

A total of 339 papers was submitted, and 108 have been selected for presentation during the Scientific Sessions which run from Friday evening through the following Monday, October 26-29. Abstracts of papers submitted will be printed in the November issue of Circulation.

The week long program will be attended by thousands of physicians, research scientists, lay leaders and others who are active in organizational and community program activities of heart associations or who wish simply to follow the latest advances in combating cardiovascular disease.

The following program highlights include features not listed in the scientific program on pages 667–672.

**Sunday, October 28**
9:30 A.M. Meeting of Executive Committee, Council on Community Service and Education. Netherland Hilton.
12:30 Luncheon and business meeting of Council on Community Service and Education. Netherland Hilton.
2:30–5:00 P.M. Community service program consultations. Netherland Hilton.
7:30 P.M. Annual Dinner Dance, including presentation of Gold Heart Awards. Netherland Hilton.

**Monday, October 29**
12:30 P.M. Luncheon and business meeting, Council on Rheumatic Fever and Congenital Heart Disease, including presentation by Lewis Thomas, M.D., on "Trends in Rheumatic Fever Research." Netherland Hilton.
9:30 A.M.–4:00 P.M. Staff Conference of Heart Associations. Netherland Hilton.

**Tuesday, October 30**
9:30 A.M. General meeting of Assembly. Address by John Smith, M.D., Rocky Mount, N. C. Netherland Hilton.
10:00 A.M.–5:00 P.M. Assembly Panel discussions. Netherland Hilton.

**Wednesday, October 31**
Wednesday afternoon through Friday noon, continuation of program of Staff Conference of Heart Associations. Netherland Hilton.

**Registration**
Forms for advance registration for the Annual Meeting and Scientific Sessions can be obtained from the Association. Those who have registered in advance as well as new registrants are required to check at the registration desk which will be set up at the Netherland Hilton Hotel on Friday, October 26, 3:00 P.M. to 10:00 P.M.; at the Music Hall Saturday through Monday, October 27–29, 8:00 A.M. to 5:00 P.M.; and at the Netherland Hilton Hotel again on Tuesday and Wednesday, October 30 and 31, 8:00 A.M. to 5:00 P.M.

**Hospitality Center**
A Hospitality Center will be maintained by the Heart Association of Greater Cincinnati at the Netherland Hilton Hotel. The center will provide information on the restaurant, recreational, educational and shopping facilities of Cincinnati. Special functions arranged for
wives of participants will include fashion shows, luncheons and conducted tours.

NONMEMBERS WELCOME

Attendance at the Scientific Sessions is open to nonmembers as well as to Heart Association members. A registration fee of $3.00 will be charged to nonmembers. This fee will entitle them to copies of the printed proceedings. Medical students, interns, residents, research workers and nurses will be welcome without payment of the fee. Registration forms, including provisions for reserving hotel space, are still available from the Association, 44 East 23rd Street, New York 10, N. Y.

DR. EDGAR V. ALLEN TO BE INDUCTED AS PRESIDENT

Edgar V. Allen, M.D., of Rochester, Minn., who will assume the Presidency of the American Heart Association at its Annual meeting in Cincinnati this month, is Senior Consultant in Medicine and Professor of Medicine at the Mayo Foundation. When Dr. Allen is inducted at the annual meeting of the Assembly, the national delegate body, on Wednesday morning, October 31, it will be a climactic point in a career that has included many years of outstanding service to the Heart Association. He has been a member of its Board of Directors since 1944 and was named Vice President in 1950. Dr. Allen was one of the founders of the American Foundation for High Blood Pressure Research, now a Council of the American Heart Association, and was Chairman of its Medical Advisory Committee in 1952-53. Dr. Allen is also renowned as an authority in the field of peripheral vascular disease, and participated in pioneering studies in the use of dicumarol as an anticoagulant.

Irvine H. Page, M.D., retiring President of the Association, now becomes Chairman of the Scientific Council. Dr. Page also was active in the organization of what is now the Association’s Council for High Blood Pressure Research. He serves as Director of Research at the Cleveland Clinic Foundation.

NOVEMBER 1 DEADLINE FOR GRANTS-IN-AID APPLICATIONS

November 1 is the deadline for submitting applications for grants-in-aid to be awarded by the Association for the fiscal year beginning next July 1. Full information and application blanks may be obtained from the Medical Director of the Association. Applications for investigatorships and fellowships for the same period were due last September 15.

FIFTH INTER-AMERICAN CONGRESS OF CARDIOLOGY

Drs. Paul D. White, Carl J. Wiggers, Ignacio Chavez and Pedro A. Castillo will be among the internationally known leaders in the cardiovascular field who will address the Fifth Inter-American Congress of Cardiology to be held at Havana, Cuba, on November 11 through 17 under the sponsorship of the Inter-American Society of Cardiology and the Cuban Society of Cardiology. The Congress will be held at Rosita de Hornedo Hotel and Blanquita Theater in the Miramar section, Marianao.

The Heart Association will be represented officially at the Congress by Edgar V. Allen, M.D., who will then be President, and Irvine H. Page, M.D., now President of the Association.

Scientific activities will include the following symposia and panel discussions:

Symposia

Atherosclerosis: Thioprophathogenesis and Treatment.

Chronic Cor Pulmonale:
Speakers: Lewis Dexter, Irene Ferrer, Andres Rotta, Narno Dorbecker and Alberto C. Taquini.

Clinical Electrocardiography and Vectorcardiography:

Present Status of Heart Surgery:

Panel Discussions

Cerebrovascular Accidents: Diagnosis and Modern Treatment.
Moderator: Irving S. Wright
Speakers: Raymond Adams, L. Gonzalez Sabathie, Clark Millikan, and Isaac Berensky.
Present Treatment of Coronary Heart Disease.
Moderator: George R. Herrmann
Speakers: Magalhaes Gomes, Dwight E. Harken, Thomas Mattingly, and Juan Govea.

Modern Aspects of Arrhythmias.
Moderator: Louis N. Katz
Speakers: Arturo Taboada, Samuel Bellet, F. Pinto Lima, and C. K. Friedberg.

Treatment of Hypertensive Heart Disease.
Moderator: E. Braun-Menendez
Speakers: S. W. Hoobler, Rafael Mendez, F. Rojas Villegas, and Clemente Robles.

Special arrangements have been made to secure a simultaneous translation of the proceedings in English, Spanish and Portuguese.

The official travel agency (Velasco Travel Bureau, Empeado 154, Havana, Cuba) is in charge of transportation and hotel reservations. Physicians attending may use this service with no additional charge.

Registration forms for the Congress are available from the Medical Director, American Heart Association, 44 East 23rd Street, New York 16, N. Y. Fees are $25 for full registration, $10 for associate registration which is available to the registrant's family. Fees are payable to the Treasurer, Dr. L. Ortega Verdes, P.O. Box 2108, Havana, Cuba. Additional information may be obtained by writing to Dr. Rafael Perez Diaz, Secretary, at the same Havana address.

United States physicians and research scientists are also welcome to attend the Latin American Congress of Angiology, also in Havana, November 8–10.

HEART ASSOCIATION SPONSORS “WORLD TRENDS IN CARDIOLOGY”

The American Heart Association has arranged with Paul B. Hoeber, Inc., medical book department of Harper & Brothers, for publication of a series of 5 volumes containing the outstanding papers and panels of special interest presented at the 2nd World Congress of Cardiology.

The Congress brought together in Washington, D. C. leading authorities from all over the world to present and discuss the latest findings on various aspects of heart disease. The importance of the material led to a demand for its publication in permanent form.

Each volume in the series, known as World Trends in Cardiology, has been carefully edited and the material has been brought up to date where necessary by the original authors. Thus the series offers a unique reference library in those areas of cardiology of active current interest.

World Trends in Cardiology consists of the following volumes:
Volume 1—Cardiovascular Epidemiology
Edited by Ancel Keys, Ph.D., and Paul D. White, M.D.

Volume 2—Cardiovascular Surgery
Edited by Helen B. Taussig, M.D., and Arthur S. Cain, Jr., M.D.

Volume 3—Blood Volume and Contractile Protein in Heart Muscle
Edited by Arthur S. Cain, Jr., M.D.

Volume 4—Cardiovascular Diagnosis and Therapy
Edited by Arthur S. Cain, Jr., M.D.

Volume 5—Instrumental Methods in Cardiac Diagnosis
Edited by Louis N. Katz, M.D., and Arthur S. Cain, Jr., M.D.

The books will vary in length from 80 to 250 pages; some with illustrations. Tentative prices range from $2.00 to $4.75 each. The first 3 volumes were scheduled for September publication and the other 2 shortly thereafter.

Orders for the set, to be shipped as issued, should be sent directly to Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y.

ANNUAL MEETING OF COUNCIL FOR HIGH BLOOD PRESSURE RESEARCH

Paul D. White, M.D. will address the Annual Dinner of the Council for High Blood Pressure Research of the American Heart Association on Friday evening, November 30. Participation in the 2-day annual meeting which will be held at the Hotel Cleveland in Cleveland on November 30 and December 1 is by invitation.

The program committee chairman is Meyer Friedman, M.D., Director of the Harold Brunn Institute for Cardiovascular Research. The scientific program follows:

Friday, November 30, 1956

Studies on the Hypertensive Action of Adrenal Steroids, Abbie I. Knowlton, M.D., Department of
Medicine, College of Physicians and Surgeons, Columbia University, New York, N. Y.

Studies on the Pathogenesis of the Hypertensive Vascular Disease Which Occurs in Rats Bearing Regenerating Adrenal Cortical Tissue, Floyd R. Skelton, M.D., Ph.D., Urban Maes Research Foundation and Department of Pathology, Louisiana State University, School of Medicine, New Orleans, Louisiana.

Studies on the Revascularized Kidney, Yale Katz, M.D., Department of Medicine, University of Southern California, Los Angeles, California.

Recent Advances in Hypertension, G. E. Wakerlin, Ph.D., M.D., Department of Physiology, University of Illinois College of Medicine, Chicago, Illinois.

Recent Advances in Atherosclerosis, A. C. Corcoran, M.D., Research Division, Cleveland Clinic, Cleveland, Ohio.

The Emotional Problems of Coronary Occlusion, Edward Weiss, M.D., Department of Medicine, University of Pennsylvania Medical School, Philadelphia, Pennsylvania.

High Blood Pressure, Damage to Arteries, Atherosclerosis—An Experimental Study, Levin L. Waters, M.D., Department of Pathology, Yale University School of Medicine, New Haven, Connecticut.

Saturday, December 1, 1956

Electron Microscopy of the Kidney, Daniel C. Pease, M.D., Department of Anatomy, University of California Medical Center, Los Angeles, California.

The Problem of Localization of Function in the Nephron, Jean Oliver, M.D., Renal Research Unit, Overlook Hospital, Summit, New Jersey.

Some Factors Influencing the Renal Excretion of Sodium and Water, H. L. White, M.D., Department of Physiology, Washington University School of Medicine, Saint Louis, Missouri.

NEW YORK HEART ASSOCIATION SENIOR FELLOWSHIPS

The New York Heart Association, for the second year, is making available a few Senior Research Fellowships in Cardiology. These will be awarded for a period of 3 years and are renewable for an additional 2 years. They carry annual stipends of $6,000 with annual increments of $500. These fellowships are full time and are available to young men and women preferably under the age of 35 who have attained a doctorate degree and demonstrated a competence for research, and who have a definite orientation towards fundamental research in the cardiovascular field. Research programs are to be carried out in recognized institutions within the area of the 5 boroughs of New York.

For further information write the Medical Director, the New York Heart Association, Inc., 485 Fifth Avenue, New York 17, N. Y.

Closing date for applications is November 15, 1956.

MEETINGS CALENDAR

October 26–October 29: Scientific Sessions of the American Heart Association, Cincinnati. American Heart Association, 44 E. 23rd St., New York 10, N. Y.


November 11–12: American Society for the Study of Arteriosclerosis, Chicago. O. J. Poliak, M.D. P.O. Box 228, Dover, Del.


November 30–December 1: Council for High Blood Pressure Research of the American Heart Association, Cleveland, Ohio. By invitation.

December 2–7: Radiological Society of North America, Chicago. D. S. Childs, 713 E. Genesee St., Syracuse 2, N. Y.

January 16–18: Conference on Cerebral Vascular Diseases, Princeton, N. J. Irving S. Wright, M.D. Cornell Medical Center, 1300 York Avenue, New York 21, N. Y.

ABROAD


November 8–10: Latin American Congress of Angiology, Havana, Cuba.

November 11–17: Inter-American Congress of Cardiology, Havana, Cuba. Dr. Ignacio Chavez, Calzada de la Piedad Num. 300, Mexico, D.F. Mexico.
# POSTGRADUATE COURSES FOR PHYSICIANS

The following listing of post-graduate courses in Cardiovascular Disease, Electrocardiography and Peripheral Vascular Disease for the period September 1, 1956 to August 31, 1957 is reprinted from the July 28, 1956 issue of the Journal of the American Medical Association by permission of its editor. Physicians interested in postgraduate course in General Practice, Internal Medicine, Basic Sciences, and in other specialties should consult the complete listing of postgraduate courses as published in the JAMA.

## KEY

- **C**—Continuous or concentrated (e.g., as every day for five days)
- **I**—Intermittent (e.g., every Thursday for six weeks)
- **A**—Time by arrangement
- **AV**—Audiovisual aids (movies, slides, models)
- **Cad**—Cadaver demonstration or dissection
- **Dem**—Demonstration other than of patients
- **EP**—Enrollee performs procedures
- **O**—Open questions
- **Lab**—Laboratory work
- **Lee**—Lecture
- **LC**—Live clinic
- **Pan**—Panel
- **Pt. Dem**—Patient demonstration
- **Sem**—Seminar
- **Sur**—Operative surgery
- **TV**—Television
- **WR**—Ward rounds

<table>
<thead>
<tr>
<th>Title of course</th>
<th>Location</th>
<th>Designed</th>
<th>Type</th>
<th>Methods of instruction</th>
<th>Total hours</th>
<th>Starting date</th>
<th>Ending date</th>
<th>Time arrangements</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular Disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26th Annual Symposium on Heart Disease</td>
<td>Los Angeles County Heart Association, 316 S. Bonnie Brae St., Los Angeles 57 University of California School of Medicine, Los Angeles 24 Monterey County Heart Association, P.O. Box 1259, Monterey, California</td>
<td>S</td>
<td>BC</td>
<td>Sem, Lee, Pan, AV</td>
<td>12½</td>
<td>10/10/56</td>
<td>10/11/56</td>
<td>C; 2 days</td>
<td>15</td>
</tr>
<tr>
<td>Pathologic Physiology of the Cardiovascular System</td>
<td>San Francisco Heart Association, 664 Mission St., San Francisco 5; course at St. Francis Hotel, San Francisco</td>
<td>G</td>
<td>SCI</td>
<td>Lee, Pan, AV</td>
<td>24</td>
<td>10/10/56</td>
<td>12/18/56</td>
<td>I; 12 sessions 2 hr. weekly, Mondays</td>
<td>50</td>
</tr>
<tr>
<td>Symposium on Heart Disease</td>
<td>Santa Barbara County Heart Association, 18 La Arcada Court, Santa Barbara, California</td>
<td>G</td>
<td>BC</td>
<td>Pt. Dem, Sem, Lee</td>
<td>12</td>
<td>12/1/56</td>
<td>12/2/56</td>
<td>C; 2 days</td>
<td>15</td>
</tr>
<tr>
<td>Twenty-Seventh Annual Symposium on Heart Disease</td>
<td>Colorado Heart Association, 901 E. 17th Ave., Denver; course at University of Colorado Medical School, Denver</td>
<td>B</td>
<td>BC</td>
<td>Pt. Dem, Lee, Pan, O, AV</td>
<td>18</td>
<td>10/3/56</td>
<td>5/5/56</td>
<td>C; 3 days</td>
<td>25 or 5 per half day session</td>
</tr>
<tr>
<td>Symposium on Heart Disease</td>
<td>University of California Medical Extension, San Francisco; course at Odd Fellows Hall, Santa Rosa, California</td>
<td>G</td>
<td>BC</td>
<td>Sem, Lee, Pan, O, AV</td>
<td>8</td>
<td>9/21/56</td>
<td>9/21/56</td>
<td>C; 1 day</td>
<td>20</td>
</tr>
<tr>
<td>Symposium on Cardiovascular Disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent Advances in Cardiovascular Disease</td>
<td></td>
<td>G</td>
<td>BC</td>
<td>Lee, Pan, AV</td>
<td>16</td>
<td>11/8/56</td>
<td>11/10/56</td>
<td>C; 3 days</td>
<td>15 outside Colorado 5 for Colorado</td>
</tr>
<tr>
<td>Fifth Western Cardiology Conference</td>
<td>University of Colorado School of Medicine, Office of Post-Graduate Medical Education, 4200 E. 9th Ave., Denver; course at Colorado Heart Association, Denver</td>
<td>B</td>
<td>BC</td>
<td>Lee, Pan</td>
<td>24</td>
<td>11/8/56</td>
<td>11/10/56</td>
<td>C; 3 days</td>
<td>15</td>
</tr>
<tr>
<td>Seminar on Cardiovascular Diseases</td>
<td>Division of Post-Graduate Education, College of Medicine, University of Florida, Gainesville, Fla.; course at Duval County Medical Center, Jacksonville, Fla.</td>
<td>B</td>
<td>BC</td>
<td>Pt. Dem, Sem, Lee, Pan, AV</td>
<td>15</td>
<td>2/57</td>
<td>2/57</td>
<td>C; 2½ days</td>
<td>10</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Scientific Sessions—8th Annual Meeting of the Georgia Heart Assn.</td>
<td>Georgia Heart Association, 4 Twelfth St., N. E., Atlanta 9, Georgia; course at General Oglethorpe Hotel, Savannah, Ga.</td>
<td>G</td>
<td>BC</td>
<td>Lee, Pan, O, AV</td>
<td>10</td>
<td>9/14/56</td>
<td>9/15/56</td>
<td>C; 2 days</td>
<td>Nil</td>
</tr>
<tr>
<td>Third Annual Program on Diseases of the Heart</td>
<td>Chicago Heart Association, 69 W. Washington St., Chicago; course at Sheraton Hotel, Chicago</td>
<td>G</td>
<td>BC</td>
<td>Sem, Lee, Pan, O, AV</td>
<td>8</td>
<td>3/20/57</td>
<td>3/20/57</td>
<td>C; 1 day</td>
<td>Nil</td>
</tr>
<tr>
<td>Cardiovascular Diseases</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>SCI</td>
<td>Pt. Dem, LC, WR, Lee, O</td>
<td>20</td>
<td>9/19/56</td>
<td>11/21/56</td>
<td>I; 10 sessions 2 hr. weekly, Wednesdays</td>
<td>100</td>
</tr>
<tr>
<td>The Diagnosis and Treatment of Congenital and Rheumatic Heart Disease in Infants and Children</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>SC</td>
<td>Lab, Pt. Dem, LC, Sur, Lee, O, AV</td>
<td>25</td>
<td>11/5/56</td>
<td>11/9/56</td>
<td>C; 5 days</td>
<td>100</td>
</tr>
<tr>
<td>Roentgenology &amp; Electrocardiography in Heart Disease in Infants and Children</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>BC</td>
<td>Lab, Pt. Dem, LC, Lee, O, AV</td>
<td>15</td>
<td>11/12/56</td>
<td>11/14/56</td>
<td>C; 3 days</td>
<td>60</td>
</tr>
<tr>
<td>Angiocardiography &amp; Catheterization in Heart Disease in Infants and Children</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>BC</td>
<td>Lab, Pt. Dem, LC, Lee, O, AV</td>
<td>15</td>
<td>11/15/56</td>
<td>11/17/56</td>
<td>C; 3 days</td>
<td>60</td>
</tr>
<tr>
<td>Postgraduate Course on Arrhythmias</td>
<td>Indiana University School of Medicine, 1100 W. Michigan St., Indianapolis</td>
<td>G</td>
<td>BC</td>
<td>Lee, Pan, AV</td>
<td>16</td>
<td>5/20/57</td>
<td>5/21/57</td>
<td>C; 2 days</td>
<td>20</td>
</tr>
<tr>
<td>Eleventh Annual Heart Conference</td>
<td>University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, Ks.</td>
<td>B</td>
<td>BC</td>
<td>Lee, Pan, O, AV</td>
<td>14</td>
<td>2/5/57</td>
<td>2/26/57</td>
<td>C; 2 days</td>
<td>Nil</td>
</tr>
<tr>
<td>Anæsthesia of the Heart</td>
<td>University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, Ks.</td>
<td>B</td>
<td>BC</td>
<td>Pt. Dem, Sem, Lee, Pan, O, AV</td>
<td>12</td>
<td>4/8/57</td>
<td>4/9/57</td>
<td>C; 2 days</td>
<td>40</td>
</tr>
<tr>
<td>In-Residence Training in Cardiovascular Disease</td>
<td>University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, Ks.</td>
<td>G</td>
<td>MT</td>
<td>Lab, Pt. Dem, LC, WR, Lee, O, AV</td>
<td>Unknown</td>
<td>2/1/57</td>
<td>2/1/57</td>
<td>I; 12 sessions 3 hr. weekly, Wednesdays</td>
<td>100</td>
</tr>
<tr>
<td>Cardiovascular Disease</td>
<td>Harvard Medical School Courses for Graduates, 25 Shattuck St., Boston; course at Massachusetts General Hospital, Boston</td>
<td>S</td>
<td>SC</td>
<td>Lab, Pt. Dem, LC, WR, Lee, O</td>
<td>Unknown</td>
<td>10/1/56</td>
<td>5/31/57</td>
<td>C, 8 mo.</td>
<td>800</td>
</tr>
<tr>
<td>Cardiology 2</td>
<td>Harvard Medical School Courses for Graduates, 25 Shattuck St., Boston; course at Boston City Hospital</td>
<td>G</td>
<td>SCI</td>
<td>Pt. Dem, Lee</td>
<td>36</td>
<td>11/7/56</td>
<td>1/20/57</td>
<td>I; 12 sessions 3 hr. weekly, Wednesdays</td>
<td>75</td>
</tr>
<tr>
<td>Cardiology 1</td>
<td>Harvard Medical School Courses for Graduates, 25 Shattuck St., Boston; course at Beth Israel Hospital, Boston</td>
<td>G</td>
<td>SC</td>
<td>Lab, Pt. Dem, LC, WR, Lee</td>
<td>Unknown</td>
<td>1/28/57</td>
<td>5/4/57</td>
<td>C; 3 mo.</td>
<td>500</td>
</tr>
<tr>
<td>Clinical Heart Disease</td>
<td>Harvard Medical School Courses for Graduates, 25 Shattuck St., Boston; course at Peter Bent Brigham Hospital, Boston</td>
<td>G</td>
<td>SC</td>
<td>Lab, Pt. Dem, LC, WR, Lee</td>
<td>120-130</td>
<td>7/1/57</td>
<td>7/31/57</td>
<td>C; 27 days</td>
<td>200</td>
</tr>
<tr>
<td>Vascular Diseases</td>
<td>Tufts University School of Medicine, Postgraduate Division, 171 Harrison Ave., Boston</td>
<td>G</td>
<td>BC</td>
<td>Pt. Dem, Lee, Pan, AV</td>
<td>10</td>
<td>11/15/56</td>
<td>11/17/56</td>
<td>C; 2 days</td>
<td>15</td>
</tr>
<tr>
<td>Title of course</td>
<td>Location</td>
<td>Design for</td>
<td>Type</td>
<td>Methods of instruction</td>
<td>Total hours</td>
<td>Starting date</td>
<td>Ending date</td>
<td>Time arrangement</td>
<td>Fee</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>-------------</td>
<td>------------------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>Cardiovascular Disease—Continued</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiology</td>
<td>Tufts University School of Medicine, Postgraduate Division, 171 Harrison Ave., Boston</td>
<td>G</td>
<td>BC</td>
<td>Pt. Dem, Lee, AV</td>
<td>14</td>
<td>4/11/57</td>
<td>4/13/57</td>
<td>C; 3 days</td>
<td>20</td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>University of Michigan Medical School, Dept. of Postgraduate Medicine, University Hospital, Ann Arbor, Mich.</td>
<td>G</td>
<td>SC</td>
<td>Pt. Dem, Lee, O</td>
<td>30</td>
<td>3/18/57</td>
<td>3/22/57</td>
<td>C; 5 days</td>
<td>50</td>
</tr>
<tr>
<td>Cardiovascular Diseases for General Physicians</td>
<td>Continuation Medical Education, 1342 Mayo Memorial, University of Minnesota, Minneapolis 14</td>
<td>G</td>
<td>BC</td>
<td>Lee, O</td>
<td>15</td>
<td>2/ 7/57</td>
<td>2/ 9/57</td>
<td>C; 3 days</td>
<td>30</td>
</tr>
<tr>
<td>Cardiovascular Seminar</td>
<td>University of Mississippi Medical School, Jackson, Miss.</td>
<td>G</td>
<td>BC</td>
<td>Sur, Sem, Lee, AV</td>
<td>20</td>
<td>6/57</td>
<td></td>
<td>C; 3 days</td>
<td>5</td>
</tr>
<tr>
<td>Nebraska Heart Association Annual Scientific Session</td>
<td>Nebraska Heart Association, 4209 Harney St., Omaha</td>
<td>G</td>
<td>BC</td>
<td>Sem, Pan, O</td>
<td>9</td>
<td>10/ 5/56</td>
<td>10/ 6/56</td>
<td>C; 3 days</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular Teaching Day</td>
<td>Albany Medical College, 47 New Scotland Ave., Albany, N. Y.</td>
<td>G</td>
<td>BC</td>
<td>Sem, Lee, Pan</td>
<td>6</td>
<td>2/ 7/57</td>
<td>2/ 7/57</td>
<td>C; 1 day</td>
<td>10</td>
</tr>
<tr>
<td>Recent Advances in Therapy of Cardiovascular Diseases</td>
<td>Albany Medical College, 47 New Scotland Ave., Albany, N. Y.</td>
<td>G</td>
<td>BC</td>
<td>WR, Sem, Lee, Pan</td>
<td>15</td>
<td>2/ 7/57</td>
<td>2/ 9/57</td>
<td>C; 1 day</td>
<td>25</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Coney Island Hospital, Ocean Parkway and Avenue Z, Brooklyn, N. Y.</td>
<td>S</td>
<td>SCI</td>
<td>Lab, Sem, Lee, Pan, O</td>
<td>8</td>
<td>9/ 6/56</td>
<td>9/27/56</td>
<td>I; 10 sessions 1 hr. weekly, Thursdays</td>
<td>Unknown</td>
</tr>
<tr>
<td>Cardiology</td>
<td>Coney Island Hospital, Ocean Parkway and Avenue Z, Brooklyn, N. Y.</td>
<td>S</td>
<td>SCI</td>
<td>Lab, Sem, Lee, Pan, O</td>
<td>10</td>
<td>10/ 2/56</td>
<td>12/ 4/56</td>
<td>I; 12 sessions 1½ hr. weekly, Wednesdays, Fridays</td>
<td>Unknown</td>
</tr>
<tr>
<td>Clinical Cardiology</td>
<td>Joint Committee on Postgraduate Education, 1313 Bedford Ave., Brooklyn 16, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>LC, WR, Lee</td>
<td>18</td>
<td>4/57</td>
<td>5/57</td>
<td>I; 12 sessions 1½ hr. weekly, Wednesdays, Fridays</td>
<td>30</td>
</tr>
<tr>
<td>Surgical Treatment of Heart Disease (PM54)</td>
<td>Montefiore Hospital, 210th St. and Bainbridge Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>Pt. Dem, LC, WR, Sur,</td>
<td>64½</td>
<td>9/25/56</td>
<td>12/29/56</td>
<td>I; 19 sessions 3½ hr. weekly, Tuesdays</td>
<td>150</td>
</tr>
<tr>
<td>Cardiology III (PM55)</td>
<td>Montefiore Hospital, 210th St. and Bainbridge Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>Lab, Pt. Dem, LC, WR,</td>
<td>64½</td>
<td>9/25/56</td>
<td>12/29/56</td>
<td>I; 19 sessions 3½ hr. weekly, Tuesdays</td>
<td>150</td>
</tr>
<tr>
<td>Cardiology I (PM60)</td>
<td>Montefiore Hospital, 210th St. and Bainbridge Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>Pt. Dem, WR, Lee, Pan</td>
<td>84</td>
<td>9/27/56</td>
<td>1/13/57</td>
<td>I; 14 sessions 2 hr. weekly, Thursdays</td>
<td>150</td>
</tr>
<tr>
<td>Cardiology II (PM62)</td>
<td>Montefiore Hospital, 210th St. and Bainbridge Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>Lab, Pt. Dem, LC, WR,</td>
<td>63</td>
<td>9/27/56</td>
<td>12/24/57</td>
<td>I; 18 sessions 3½ hr. weekly, Thursdays</td>
<td>150</td>
</tr>
<tr>
<td>Clinical Cardiology</td>
<td>Mount Sinai Hospital, Fifth Ave. &amp; 100th St., New York 29</td>
<td>G</td>
<td>SCI</td>
<td>Pt. Dem, LC, Lee</td>
<td>20</td>
<td>10/16/56</td>
<td>12/18/56</td>
<td>I; 10 sessions 2 hr. weekly, Tuesdays</td>
<td>50</td>
</tr>
<tr>
<td>Medicine (PM31)</td>
<td>Mount Sinai Hospital, Fifth Ave. &amp; 100th St., New York 29</td>
<td>G</td>
<td>SC</td>
<td>Pt. Dem, LC, Lee</td>
<td>70</td>
<td>1/15/57</td>
<td>2/ 8/57</td>
<td>C; 10 days</td>
<td>100</td>
</tr>
<tr>
<td>Heart Disease and Circulatory Dynamics (PM 46)</td>
<td>Mount Sinai Hospital, Fifth Ave. &amp; 100th St., New York 29</td>
<td>G</td>
<td>SC</td>
<td>Pt. Dem, LC, WR, Sem,</td>
<td>30</td>
<td>Arranged</td>
<td></td>
<td>I; 10 sessions 2 hr. weekly, Tuesdays</td>
<td>75</td>
</tr>
<tr>
<td>5415-A Modern Concepts in Etiology, Diagnosis and Treatment of Heart Diseases</td>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td>G</td>
<td>SC</td>
<td>Pt. Dem, Lee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMERICAN HEART ASSOCIATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>548-A Modern Trends in Diagnosis and Treatment of Congenital Heart Disease</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G BC</td>
<td>Pt. Dem, Lee, AV</td>
<td>21</td>
<td>2/ 4/57</td>
<td>2/ 6/57</td>
<td>C; 3 days</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>549-A Cardiology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>549-A Cardiology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SC</td>
<td>Pt. Dem, AV, Lee</td>
<td>105</td>
<td>5/ 6/57</td>
<td>5/24/57</td>
<td>C; 15 days</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cardiovascular Diseases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rochester General Hospital, 501 W. Main St., Rochester, N. Y.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Pt. Dem, LC, WR, Lee, Pan, O</td>
<td>24</td>
<td>10/11/56</td>
<td>1/31/57</td>
<td>I; 12 sessions 3 hr. weekly, Thursdays</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Seminars on Heart Disease</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Francis Hospital and Sanatorium, Roslyn, New York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Sem, Lee, O</td>
<td>16</td>
<td>10/56</td>
<td>5/57</td>
<td>I; 8 sessions 3 hr. monthly, Tuesdays</td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Postgraduate Course in Cardiology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Francis Hospital and Sanatorium, Roslyn, New York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SC</td>
<td>Pt. Dem, LC, WR, Lee, Pan, O, AV</td>
<td>82</td>
<td>4/15/57</td>
<td>4/27/57</td>
<td>C; 10 days</td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Cardiology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Michael's Hospital, 306 High St., Newark, N. J.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Pt. Dem, Lee, Pan, O, AV</td>
<td>35</td>
<td>10/ 3/56</td>
<td>2/20/57</td>
<td>I; 10 sessions 3 ½ hr. twice monthly, Wednesdays</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The Prevention and Management of Cardiac Arrest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleveland Area Heart Assn., 2073 East 9th St., Cleveland; course at Western Reserve University School of Medicine, Cleveland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B SCI</td>
<td>Lab, Sur, Lee, AV, EFP</td>
<td>90</td>
<td>9/56</td>
<td>6/57</td>
<td>I; 30 sessions 3 hr. monthly Friday and Saturday</td>
<td>20 to 40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recent Advances in Cardiovascular Disease</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American College of Physicians, 4200 Pine St., Philadelphia; course at Mt. Sinai Hospital, New York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S SC</td>
<td>Lee, Pan</td>
<td>40</td>
<td>10/ 8/56</td>
<td>10/12/56</td>
<td>C; 5 days</td>
<td>30 Members 60 Nonmembers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post Graduate Cardiology #1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hahnemann Medical College and Hospital, 230 N. Broad St., Philadelphia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Pt. Dem, Lee, Pan, AV</td>
<td>Unknown</td>
<td>10/56</td>
<td>5/57</td>
<td>I; 2½ hr., Thursdays</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post Graduate Cardiology #2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hahnemann Medical College and Hospital, 230 N. Broad St., Philadelphia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Pt. Dem, Lee, Pan, AV</td>
<td>10/56</td>
<td>5/57</td>
<td>I; 2½ hr., Wednesdays</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Functional and Degenerative Heart Disease</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Vermont, Burlington, Vt.; course at DeGoesbriand Memorial Hospital, Burlington, Vt.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S SC</td>
<td>Lab, Pt. Dem, WR, Lee</td>
<td>15</td>
<td>10/22/56</td>
<td>10/26/56</td>
<td>C; 5 days</td>
<td>Nil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Annual Symposium of Washington State Heart Association</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Washington School of Medicine, Seattle 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G BC</td>
<td>Lee, Pan, O</td>
<td>9</td>
<td>9/26/56</td>
<td>9/29/56</td>
<td>C; 1½ days</td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electrocardiography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of California School of Medicine, Los Angeles 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Lee, AV</td>
<td>12</td>
<td>11/21/56</td>
<td>12/20/56</td>
<td>I; 6 sessions 2 hr. weekly, Wednesdays 1 year</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>855 Home Course in Electrocardiography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Southern California, School of Medicine, Postgraduate Division, 2025 Zonal Ave., Los Angeles 33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G HS(C)</td>
<td>EPP</td>
<td>52</td>
<td>7/13/56</td>
<td>10/19/56</td>
<td>1/18/57</td>
<td>4/19/57</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>854—Practical Electrocardiography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Southern California, School of Medicine, Postgraduate Division, 2025 Zonal Ave., Los Angeles 33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G BC</td>
<td>Lee, Pan, O</td>
<td>23</td>
<td>2/57</td>
<td>2/57</td>
<td>C; 3 days</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Medicine, 213, Elementary Electrocardiography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yale University School of Medicine, 333 Cedar St., New Haven, Conn.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G SCI</td>
<td>Lee, AV</td>
<td>12</td>
<td>10/ 2/56</td>
<td>12/18/56</td>
<td>I; 12 sessions 1 hr. weekly, Tuesdays</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Electrocardiography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado Heart Association, 301 E. 17th Ave., Denver; course at Veterans Administration Hospital, Denver</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G BC</td>
<td>Lee, Pan, AV</td>
<td>18</td>
<td>11/ 5/56</td>
<td>11/ 7/56</td>
<td>C; 3 days</td>
<td>15 outside Colorado 5 Colorado 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fundamentals of Electrocardiography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Colorado Medical Center, 4200 E. 9th Ave., Denver 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| G SCI | Lee | 24 | 10/56 | 12/56 | I; 12 sessions 2 hr. weekly | 15 5 Colorado 10
<table>
<thead>
<tr>
<th>Title of course</th>
<th>Location</th>
<th>Designer for</th>
<th>Type</th>
<th>Methods of instruction</th>
<th>Total hours</th>
<th>Starting date</th>
<th>Ending date</th>
<th>Time arrangement</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrocardiography—Continued</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Electrocardiography</td>
<td>University of Colorado Medical Center, 4200 E. 9th Ave., Denver 20</td>
<td>B</td>
<td>BC</td>
<td>Pt. Dem, Lee, Pan</td>
<td>24</td>
<td>11/5/56</td>
<td>11/7/56</td>
<td>C; 3 days</td>
<td>15</td>
</tr>
<tr>
<td>Elementary Clinical Electrocardiography</td>
<td>Lawrence and Memorial Associated Hospital, Montauk Ave., New London, Conn.</td>
<td>G</td>
<td>SCI</td>
<td>Lee, O, AV</td>
<td>34</td>
<td>9/15/56</td>
<td>2/57</td>
<td>I; 17 sessions 2 hr. weekly, Tuesdays</td>
<td>70</td>
</tr>
<tr>
<td>Basic Electrocardiography</td>
<td>The Memorial Hospital, 1501 Van Buren St., Wilmington, Del.</td>
<td>G</td>
<td>SCI</td>
<td>Lee</td>
<td>12</td>
<td>9/56</td>
<td>12/56</td>
<td>I; 12 sessions 1 hr. weekly, Tuesdays</td>
<td>50</td>
</tr>
<tr>
<td>Advances in Electrocardiography</td>
<td>Mount Sinai Hospital of Greater Miami, 4600 Alton Rd., Miami Beach, Fla.</td>
<td>S</td>
<td>SC</td>
<td>Lab, Pt. Dem, Lee, Pan, O, AV</td>
<td>48</td>
<td>Unknown</td>
<td></td>
<td>C; 6 days</td>
<td>30</td>
</tr>
<tr>
<td>Advance Course in Electrocardiography</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>SC</td>
<td>Lab, Lee, O</td>
<td>40</td>
<td>9/17/56</td>
<td>9/22/56</td>
<td>C; 6 days</td>
<td>150</td>
</tr>
<tr>
<td>Electrocardiography &amp; Heart Disease</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>SCI</td>
<td>Lab, Pt. Dem, LC, Lee, O, EPP</td>
<td>70</td>
<td>9/28/56</td>
<td>11/25/56</td>
<td>I; 10 sessions 7 hr. weekly, Wednesdays</td>
<td>150</td>
</tr>
<tr>
<td>Electrocardiography &amp; Heart Disease</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>SC</td>
<td>Lab, Pt. Dem, Lee, O, EPP</td>
<td>76</td>
<td>10/8/56</td>
<td>10/20/56</td>
<td>C; 2 wk.</td>
<td>150</td>
</tr>
<tr>
<td>Advanced Electrocardiography—Complex Arrhythmias</td>
<td>Michael Reese Hospital, 29th St. and Ellis Ave., Chicago 16</td>
<td>S</td>
<td>SC</td>
<td>Sem, Lee, Pan, O, AV, EPP</td>
<td>35</td>
<td>12/3/56</td>
<td>12/7/56</td>
<td>C; 5 days</td>
<td>100</td>
</tr>
<tr>
<td>Electrocardiographic Interpretation</td>
<td>Michael Reese Hospital, 29th St. and Ellis Ave., Chicago 16</td>
<td>B</td>
<td>SCI</td>
<td>Lee, Pan</td>
<td>24</td>
<td>2/6/57</td>
<td>4/24/57</td>
<td>I; 12 sessions 2 hr. weekly, Wednesdays</td>
<td>50</td>
</tr>
<tr>
<td>Electrocardiographic Interpretation</td>
<td>Michael Reese Hospital, 29th St. and Ellis Ave., Chicago 16</td>
<td>B</td>
<td>SC</td>
<td>Sem, Lee, Pan, AV, EPP</td>
<td>80</td>
<td>8/19/57</td>
<td>8/30/57</td>
<td>C; 10 days</td>
<td>150</td>
</tr>
<tr>
<td>Clinical Electrocardiography</td>
<td>Indiana University General Hospital, 10th and Locke St., Indianapolis</td>
<td>G</td>
<td>SCI</td>
<td>Lee, O, AV</td>
<td>23</td>
<td>3/4/57</td>
<td>3/6/57</td>
<td>C; 3 days</td>
<td>30</td>
</tr>
<tr>
<td>Postgraduate Course in Basic Electrocardiography</td>
<td>Indiana University School of Medicine, 1100 W. Michigan St., Indianapolis</td>
<td>G</td>
<td>BC</td>
<td>Lee, O, AV</td>
<td>24</td>
<td>9/6/56</td>
<td>11/29/56</td>
<td>I; 12 sessions 2 hr. weekly, Thursdays</td>
<td>15</td>
</tr>
<tr>
<td>Interpretation of Electrocardiograms—Course I</td>
<td>University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS.</td>
<td>B</td>
<td>HS(C)</td>
<td></td>
<td>10/19/56</td>
<td>4/19/57</td>
<td></td>
<td>6 mo.</td>
<td>18</td>
</tr>
<tr>
<td>Interpretation of Electrocardiograms—Course II</td>
<td>University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS.</td>
<td>B</td>
<td>HS(C)</td>
<td></td>
<td>11/22/56</td>
<td>5/23/57</td>
<td></td>
<td>6 mo.</td>
<td>17</td>
</tr>
<tr>
<td>Clinical Application of Electrocardiography</td>
<td>University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS.</td>
<td>B</td>
<td>BC</td>
<td>Lee, Pan, O, AV</td>
<td>30</td>
<td>3/18/57</td>
<td>3/31/57</td>
<td>C; 4 days</td>
<td>50</td>
</tr>
<tr>
<td>Electrocardiography</td>
<td>Tulane University School of Medicine, 1430 Tulane Ave., New Orleans</td>
<td>G</td>
<td>SC</td>
<td>Lab, Sem, Lee, EPP</td>
<td>84</td>
<td>11/26/56</td>
<td>12/8/56</td>
<td>C; 10 days</td>
<td>100</td>
</tr>
<tr>
<td>Practical Electrocardiography, Course B</td>
<td>Beth Israel Hospital, 330 Brookline Ave., Boston</td>
<td>G</td>
<td>SCI</td>
<td>Lee, O, AV, EPP</td>
<td>30</td>
<td>10/3/56</td>
<td>12/5/56</td>
<td>I; 10 sessions 3 hr. weekly, Wednesdays</td>
<td>100</td>
</tr>
<tr>
<td>Practical Electrocardiography, Course A</td>
<td>Beth Israel Hospital, 330 Brookline Ave., Boston</td>
<td>G</td>
<td>SC</td>
<td>Lee, O, AV, EPP</td>
<td>30</td>
<td>11/5/56</td>
<td>11/9/56</td>
<td>C; 5 days</td>
<td>100</td>
</tr>
<tr>
<td>ECG Clinics, Course B</td>
<td>Beth Israel Hospital, 330 Brookline Ave., Boston</td>
<td>G</td>
<td>SCI</td>
<td>Lee, O, AV, EPP</td>
<td>30</td>
<td>3/6/57</td>
<td>5/8/57</td>
<td>I; 10 sessions 3 hr. weekly, Wednesdays</td>
<td>100</td>
</tr>
<tr>
<td>ECG Clinics, Course C</td>
<td>Beth Israel Hospital, 330 Brookline Ave., Boston</td>
<td>G</td>
<td>SC</td>
<td>Lee, O, AV, EPP</td>
<td>30</td>
<td>4/23/57</td>
<td>4/27/57</td>
<td>C; 5 days</td>
<td>100</td>
</tr>
<tr>
<td>Electrocardiography I</td>
<td>Tufts University School of Medicine, Post-Graduate Division, 171 Harrison Ave., Boston</td>
<td>G</td>
<td>SC</td>
<td>Pt. Dem, Lee, Pan, AV</td>
<td>25</td>
<td>12/17/56</td>
<td>12/21/56</td>
<td>C; 5 days</td>
<td>40</td>
</tr>
<tr>
<td>Course Title</td>
<td>Institution</td>
<td>Code</td>
<td>Instructor</td>
<td>Credits</td>
<td>Start Date</td>
<td>End Date</td>
<td>Type</td>
<td>Days</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
<td>-------------</td>
<td>----------</td>
<td>------------</td>
<td>----------</td>
<td>------</td>
<td>------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Electrocardiography II</td>
<td>Tufts University School of Medicine, Post-Graduate Division, 171 Harrison Ave., Boston</td>
<td>G</td>
<td>BC</td>
<td>18</td>
<td>5/13/57</td>
<td>5/15/57</td>
<td></td>
<td></td>
<td>C; 3 days</td>
</tr>
<tr>
<td>Electrocardiographic Diagnosis</td>
<td>University of Michigan Medical School, Department of Postgraduate Medicine, University Hospital, Ann Arbor, Mich.</td>
<td>G</td>
<td>SC</td>
<td>34</td>
<td>3/25/57</td>
<td>3/30/57</td>
<td></td>
<td></td>
<td>C; 5½ days</td>
</tr>
<tr>
<td>Introduction to Electrocardiography</td>
<td>Continuation Medical Education, 1342 Mayo Memorial, University of Minnesota, Minneapolis 14</td>
<td>G</td>
<td>SC</td>
<td>30</td>
<td>5/6/57</td>
<td>5/10/57</td>
<td></td>
<td></td>
<td>C; 5 days</td>
</tr>
<tr>
<td>Electrocardiography</td>
<td>University of Nebraska College of Medicine, 42nd and Dewey, Omaha</td>
<td>G</td>
<td>BC</td>
<td>24</td>
<td>10/1/56</td>
<td>10/4/56</td>
<td></td>
<td></td>
<td>C; 4 days</td>
</tr>
<tr>
<td>Principles of Electrocardiography</td>
<td>Albany Medical College, 47 New Scotland Ave., Albany, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>12</td>
<td>9/13/56</td>
<td>10/18/56</td>
<td>I;</td>
<td>6 sessions 2 hr. weekly, Thursdays</td>
<td></td>
</tr>
<tr>
<td>Advanced Course in Interpretation of Electrocardiograms</td>
<td>Albany Medical College, 47 New Scotland Ave., Albany, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>12</td>
<td>10/25/56</td>
<td>12/6/56</td>
<td>I;</td>
<td>6 sessions 2 hr. weekly, Thursdays</td>
<td></td>
</tr>
<tr>
<td>Clinical Correlation of Electrocardiograms with Disease Processes (Hospitalized Patients)</td>
<td>Albany Medical College, 47 New Scotland Ave., Albany, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>24</td>
<td>Arranged</td>
<td></td>
<td>I; 12 sessions 2 hr. each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Electrocardiography</td>
<td>Joint Committee on Post-Graduate Education, 1318 Bedford Ave., Brooklyn 16, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>12</td>
<td>10/56</td>
<td>11/56</td>
<td>I;</td>
<td>12 sessions 1 hr. twice weekly, Mondays, Fridays</td>
<td></td>
</tr>
<tr>
<td>Interpretation of the Electrocardiogram</td>
<td>Joint Committee on Post-Graduate Education, 1318 Bedford Ave., Brooklyn 16, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>100</td>
<td>10/56</td>
<td>12/56</td>
<td>I;</td>
<td>10 sessions 10 hr. weekly, Tuesdays</td>
<td></td>
</tr>
<tr>
<td>Introduction to Electrocardiography</td>
<td>University of Buffalo School of Medicine, 3455 Main St., Buffalo, N. Y.</td>
<td>G</td>
<td>BCI</td>
<td>12</td>
<td>9/20/56</td>
<td>10/11/56</td>
<td>I;</td>
<td>4 sessions 3 hr. weekly, Thursdays</td>
<td></td>
</tr>
<tr>
<td>Electrocardiographic Interpretation</td>
<td>University of Buffalo School of Medicine, 3455 Main St., Buffalo, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>24</td>
<td>10/15/56</td>
<td>12/13/56</td>
<td>I;</td>
<td>8 sessions 3 hr. weekly, Thursdays</td>
<td></td>
</tr>
<tr>
<td>Electrocardiography</td>
<td>Community Hospital at Glen Cove, Walnut Ave., Glen Cove, N. Y.</td>
<td>G</td>
<td>SCI</td>
<td>20</td>
<td>1/6/57</td>
<td>3/10/57</td>
<td>I;</td>
<td>10 sessions 2 hr. weekly, Sundays</td>
<td></td>
</tr>
<tr>
<td>Medicine (PM 63A)</td>
<td>Montefiore Hospital, 210th St. and Bainbridge Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>38</td>
<td>9/25/56</td>
<td>1/29/57</td>
<td>I;</td>
<td>19 sessions 2 hr. weekly, Tuesdays</td>
<td></td>
</tr>
<tr>
<td>Elementary Electrocardiography (PM 41)</td>
<td>Mt. Sinai Hospital, Fifth Ave. and 160th St., New York 29</td>
<td>G</td>
<td>SC</td>
<td>30</td>
<td>10/15/56</td>
<td>10/19/56</td>
<td>C;</td>
<td>5 days</td>
<td></td>
</tr>
<tr>
<td>Advanced Electrocardiography (PM 42)</td>
<td>Mount Sinai Hospital, Fifth Ave. and 100th St., New York 29</td>
<td>G</td>
<td>SC</td>
<td>30</td>
<td>10/22/56</td>
<td>10/26/56</td>
<td>C;</td>
<td>5 days</td>
<td></td>
</tr>
<tr>
<td>Spatial Vectorcardiography (PM 43)</td>
<td>Mount Sinai Hospital, Fifth Ave. and 100th St., New York 29</td>
<td>G</td>
<td>SC</td>
<td>28</td>
<td>12/3/56</td>
<td>12/8/56</td>
<td>C;</td>
<td>6 days</td>
<td></td>
</tr>
<tr>
<td>Electrocardiographic Interpretation</td>
<td>New York Polytechnic Medical School and Hospital, 345 W. 50th St., New York</td>
<td>G</td>
<td>SC</td>
<td>20</td>
<td>Arranged</td>
<td></td>
<td>C;</td>
<td>10 days</td>
<td></td>
</tr>
<tr>
<td>Practical Electrocardiography</td>
<td>New York Polytechnic Medical School and Hospital, 345 W. 5th St., New York</td>
<td>G</td>
<td>SC</td>
<td>10</td>
<td>Arranged</td>
<td></td>
<td>C;</td>
<td>5 days</td>
<td></td>
</tr>
<tr>
<td>5416-A Fundamentals of Clinical Electrocardiographic Interpretation</td>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>32</td>
<td>11/7/56</td>
<td>3/6/57</td>
<td>I;</td>
<td>16 sessions 2 hr. weekly, Wednesdays</td>
<td></td>
</tr>
<tr>
<td>5412-A Electrocardiography</td>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td>G</td>
<td>SC</td>
<td>35</td>
<td>11/12/56</td>
<td>11/18/56</td>
<td>C;</td>
<td>5 days</td>
<td></td>
</tr>
<tr>
<td>5411-A Clinical Electrocardiography</td>
<td>New York University Post-Graduate Medical School, 550 First Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>10½</td>
<td>4/11/57</td>
<td>5/23/57</td>
<td>I;</td>
<td>7 sessions 1½ hr. weekly, Thursdays</td>
<td></td>
</tr>
</tbody>
</table>
### Electrocardiography—Continued

<table>
<thead>
<tr>
<th>Title of course</th>
<th>Location</th>
<th>Designed for</th>
<th>Type</th>
<th>Methods of instruction</th>
<th>Total hours</th>
<th>Starting date</th>
<th>Ending date</th>
<th>Time arrangement</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Electrocardiography</td>
<td>State University of New York Upstate Medical Center, 766 Irving Ave.,</td>
<td>G</td>
<td>SCI</td>
<td>Lee, AV</td>
<td>14</td>
<td>10/11/56</td>
<td>11/22/56</td>
<td>I; 7 sessions 2 hr. weekly, Thursdays</td>
<td>15</td>
</tr>
<tr>
<td>Electrocardiographic Review, Primary in June Advanced in January</td>
<td>Duke University School of Medicine, Durham, N. C.</td>
<td>G</td>
<td>BC</td>
<td>Lab, Pt. Dem, LC, WR, Pan</td>
<td>18</td>
<td>6/57</td>
<td>6/57</td>
<td>C; 3 days Paid by N.C. Health Department</td>
<td>75</td>
</tr>
<tr>
<td>Electrocardiography and Other Diagnostic Methods</td>
<td>Graduate School of Medicine, University of Pennsylvania, Philadelphia</td>
<td>B</td>
<td>SCI</td>
<td>Lee, Pan</td>
<td>30</td>
<td>1/9/57</td>
<td>3/13/57</td>
<td>I; 10 sessions 3 hr. weekly, Wednesdays</td>
<td>45</td>
</tr>
<tr>
<td>Electrocardiology</td>
<td>The University of Texas Postgraduate School of Medicine, Texas Medical Center, Houston 25, Texas</td>
<td>B</td>
<td>SC</td>
<td>Lab, Pt. Dem, Lee, TV</td>
<td>30</td>
<td>12/3/56</td>
<td>12/7/56</td>
<td>C; 5 days</td>
<td>10</td>
</tr>
</tbody>
</table>

### Peripheral Vascular Disease

<table>
<thead>
<tr>
<th>Title of course</th>
<th>Location</th>
<th>Designed for</th>
<th>Type</th>
<th>Methods of instruction</th>
<th>Total hours</th>
<th>Starting date</th>
<th>Ending date</th>
<th>Time arrangement</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment of Varicose Veins</td>
<td>Cook County Graduate School of Medicine, 707 S. Wood St., Chicago 12</td>
<td>G</td>
<td>BC</td>
<td>Lab, Pt. Dem, LC, Sur,</td>
<td>10</td>
<td>9/10/56</td>
<td>9/12/56</td>
<td>C; 2 days</td>
<td>50</td>
</tr>
<tr>
<td>Varicose Veins; The Peripheral System</td>
<td>College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33</td>
<td>G</td>
<td>SCI</td>
<td>Lee, Pan</td>
<td>14</td>
<td>1/15/57</td>
<td>2/26/57</td>
<td>I; 7 sessions 2 hr. weekly, Tuesdays</td>
<td>30</td>
</tr>
<tr>
<td>Peripheral Vascular Diseases</td>
<td>Joint Committee on Post-Graduate Education, 1313 Bedford Ave., Brooklyn 10, N. Y.; course at Coney Island Hospital, Brooklyn, New York</td>
<td>G</td>
<td>SCI</td>
<td>Pt. Dem, Lee</td>
<td>10</td>
<td>10/56</td>
<td>12/56</td>
<td>I; 10 sessions 1 hr. weekly, Mondays</td>
<td>20</td>
</tr>
<tr>
<td>Peripheral Vascular Diseases</td>
<td>Joint Committee on Post-Graduate Education, 1313 Bedford Ave., Brooklyn 10; course at Jewish Hospital, Brooklyn</td>
<td>G</td>
<td>SCI</td>
<td>LC, Lee</td>
<td>10</td>
<td>4/57</td>
<td>5/57</td>
<td>I; 10 sessions 1 hr. twice weekly, Mondays</td>
<td>20</td>
</tr>
<tr>
<td>Medicine (PM 65)</td>
<td>Montefiore Hospital, 210th St. &amp; Bainbridge Ave., New York</td>
<td>G</td>
<td>SCI</td>
<td>Lab, Pt. Dem, LC, WR,</td>
<td>84</td>
<td>9/20/56</td>
<td>3/28/57</td>
<td>I; 28 sessions 3 hr. weekly, Thursdays</td>
<td>125</td>
</tr>
</tbody>
</table>
29th SCIENTIFIC SESSIONS
of the AMERICAN HEART ASSOCIATION
October 26-29, 1956

FRIDAY EVENING
OCTOBER 26, 1956

SPECIAL SCIENTIFIC SESSION
Electrocardiography, Vectorcardiography and Ballistocardiography
Netherland-Hilton Hotel—8:00 P.M. to 11:00 P.M.
Chairman: Charles E. Kossmann, New York, N. Y.
Co-Chairman: Johnson McGuire, Cincinnati, Ohio
Peri-infarction Block as a Cause of Left Axis Deviation. Robert P. Grant, Bethesda, Md.
Right and Left Bundle-Branch Block in Young Healthy Subjects. Sami I. Said and J. Marion Bryant, New York, N. Y.

SATURDAY MORNING
OCTOBER 27, 1956

GENERAL SCIENTIFIC SESSION
Music Hall Auditorium—9:00 A.M. to 12:30 P.M.
Chairman: George E. Burch, New Orleans, La.
Co-Chairman: E. Cowles Andrus, Baltimore, Md.
Hemodynamic Consequences of Valve Obstruction: A Physiologic Classification of Mitral Stenosis. Hans H. Hecht and Ramon L. Lange, Salt Lake City, Utah.
Six Months to Six Years Experience with Eighty-Five Cases of Coronary Artery Insufficiency Treated by Internal Mammary Artery Im-
A Follow-up Study of 1000 Patients with Mitral Stenosis Undergoing Valvuloplasty. Lawrence B. Ellis, and Dwight E. Harken, Boston, Mass.

PRESENTATION OF THE ALBERT LASKER AWARD


SATURDAY AFTERNOON
OCTOBER 27, 1956

SIMULTANEOUS SCIENTIFIC SESSIONS

Clinical Cardiology

Music Hall Auditorium—2:00 P.M. to 5:30 P.M.
Chairman: Howard B. Burchell, Rochester, Minn.
Co-Chairman: William H. Bunn, Youngstown, Ohio


Hemodynamic and Volumetric Changes in Mitral Valve Disease in Man. Robert P. Grant, Andrew G. Morrow, and Edward Sharpe, Bethesda, Md.

Right and Left Atrium Needle Puncture for Simultaneous Right and Left Heart Catheterization. Don L. Fisher and Maurice M. McCaffrey, Pittsburgh, Pa.


Sequence of Ventricular Contraction in Human Bundle-Branch Block. Eugene Braunwald and Andrew G. Morrow, Bethesda, Md.


PANEL: Selection and Management of Patients for Cardiac Surgery

Howard B. Burchell, Rochester, Minn., Moderator.
S. Gilbert Blount, Jr., Denver, Colo.
Mary Allen Engle, New York, N. Y.
Robert E. Gross, Boston, Mass.
C. Walton Lillehei, Minneapolis, Minn.

Basic Science and Circulation

Music Hall Ballroom—2:00 P.M. to 5:30 P.M.
Chairman: Edward D. Freis, Washington, D. C.
Co-Chairman: Louis N. Katz, Chicago, Ill.

Studies of the Mechanism of Pulmonary Infarction. Brent M. Parker and John R. Smith, St. Louis, Mo.

Evidence, Including In Vivo Observations, Suggesting Mechanical Blockage Rather than Reflex Vasospasm as the Cause of Death in Pulmonary Embolization. William H. Knisely, John M. Wallace, M. Stephen Mahaley, Jr., and W. M. Satterwhite, Jr., Durham, N. C.


Infundibular Dynamics Studied by Cineangiocardiography in Pure Valvular Pulmonary Stenosis. Frank L. Campeti, Rochester, N. Y.


Studies on Dyspnea and Pulmonary Edema in Patients with Rheumatic Heart Disease While Breathing High Oxygen Mixtures. Oldrich C. Pree, Ormand C. Julian, and Frederick Wood, Jr., Chicago, Ill.

Contractile Proteins of the Failing Myocardium as Studied with Glycerol-Extracted Muscle Preparations. Ellis S. Benson and Ben E. Hallaway, Minneapolis, Minn.


Business Meeting: Section on Circulation

Cardiovascular Surgery

Music Hall North Arena—2:00 P.M. to 5:30 P.M.
Co-Chairman: Frank Glenn, New York, N. Y.


Induced Cardiac Arrest as an Adjunct in Intracardiac Surgical Procedures: An Experimental Study. Conrad R. Lam, Thomas Geoghegan, Alfredo Lepore, and Charles K. Sergeant, Detroit, Mich.

Electric Ventricular Defibrillation: Relationship Between Epicardial Burns and Late Mortality. Allan B. Kortz and Henry Swan, Denver, Colo.

Effects of Upright Posture and Exercise (Grade Walking) on Pulmonary Hemodynamics in Patients with Left-to-Right Shunts. Robert A. Bruce and Gregory G. John, Seattle, Wash.

Surgical Approaches to the Problem of Myocardial Ischemia. Alan P. Thal, Fletcher A. Miller, and Christian N. Barnard, Minneapolis, Minn.


Business Meeting: Section on Cardiovascular Surgery

Clinical Experience With Metaraminol in the Treatment of Shock. Max H. Weil and Wesley W. Spink, Minneapolis, Minn.


Prevalence of Heart Disease in the Population of Baltimore. Dean W. Roberts, Peter G. Meek, and Dean E. Krueger, Baltimore, Md.


SUNDAY AFTERNOON
OCTOBER 28, 1956

SIMULTANEOUS SCIENTIFIC SESSIONS

Clinical Cardiology

Music Hall Auditorium—2:00 P.M. to 5:30 P.M.

Chairman: Emmet Bay, Chicago, Ill.
Co-Chairman: Louis E. Martin, Los Angeles, Calif.


Alcohol in the Therapy of Hyponatremic Edema-tous States. Herschel V. Murdaugh, Durham, N. C.

Effect of Carotid Sinus Stimulation on the Electrocardiograms of Normal Individuals. Guenther

Variable Relationship of Pulsus Alternans to Stage of Heart Failure. Joseph M. Ryan, James F. Schieee, Hugh B. Hull, and Beryl M. Oser, Columbus, Ohio.

PANEL: The Management of Refractory Congestive Heart Failure

E. Hugh Luckey, New York, N. Y., MODERATOR.

Guy W. Daugherty, Rochester, Minn.


George C. Griffith, Los Angeles, Calif.

Eugene A. Stead, Jr., Durham, N. C.

Basic Science and Circulation

Music Hall Ballroom—2:00 P.M. to 5:30 P.M.

Chairman: Eric Ogden, Columbus, Ohio

Co-Chairman: Eugene B. Ferris, Atlanta, Ga.


Effect of Exercise on the Growth of Coronary Arterial Anastomoses Subsequent to Coronary Arterial Narrowing in Dogs. Richard W. Eckstein, Cleveland, Ohio.


Hemodynamic Effects of Large Dose Infusions of 1-Norepinephrine During Pulmonary Arterial Constriction. Noble O. Fowler, Robert H. Franch, and Edward R. Dukesme, Atlanta, Ga.

Business Meeting: Session on Basic Science

High Blood Pressure

Music Hall North Arena—2:00 P.M. to 5:30 P.M.

Chairman: Meyer W. Friedman, San Francisco, Calif.

Co-Chairman: Thomas Findley, Augusta, Ga.


Sodium and the Mechanism of Blood Pressure Elevation. Sydney M. Friedman and Constance L. Friedman, Vancouver, B. C., Canada.

Pressor and Depressor Responses to Tilting in Hypertensive Patients. Robert S. Green, Arnold Iglauer, and Ralph C. Scott, Cincinnati, Ohio

Pathogenesis of Experimental Hypertension Produced by Carotid Sinus Area Constriction in Dogs. Earle E. Crandall and George E. Wakerlin, Chicago, Ill.


Studies on Mechanism of Tolerance to Ganglionic-Blocking Drugs. Herbert G. Langford and John Harbour, Jackson, Miss.

Studies of Two Pure Veratrum Alkaloids, Protoveratrine A and Protoveratrine B. Bertram M. Winer, Boston, Mass.
MONDAY MORNING
OCTOBER 29, 1956

GENERAL SCIENTIFIC SESSION

Music Hall Auditorium—9:00 A.M. to 12:30 P.M.

Chairman: Edgar V. Allen, Rochester, Minn.
Co-Chairman: Harold Feil, Cleveland, Ohio


Influence of a Hot and Humid Environment on Cardiac Output and Work in Normal Man and in Patients with Chronic Congestive Heart Failure at Rest. George E. Burck and Albert Hyman, New Orleans, La.


Hypertension and Pyelonephritis Masquerading as Toxemia of Pregnancy: An Analysis of 1081 Cases Followed by an Internist. Frank A. Finnerty, Jr., Washington, D. C.


SYMPOSIUM: Rehabilitation of the Cardiac Patient

Louis N. Katz, Chicago, Ill., MODERATOR.
Robert A. Bruce, Seattle, Wash.
Norman Plummer, New York, N. Y.
Herman K. Hellerstein, Cleveland, Ohio.

Business Meeting: Scientific Council

† Deceased

MONDAY AFTERNOON
OCTOBER 29, 1956

SIMULTANEOUS SCIENTIFIC SESSIONS

Clinical Cardiology

Music Hall Auditorium—2:00 P.M. to 5:30 P.M.

Chairman: John S. LaDue, New York, N. Y.
Co-Chairman: Milton Mendelowitz, New York, N. Y.

Myocarditis Due to Common Respiratory Viruses. Earl N. Silber, Alfred Pick, and Albert Miltzer, Chicago, Ill.

III. Cerebral Vascular Disease: Ten Year Experience with the Use of Anticoagulants in Certain Cerebral Vascular Syndromes. Ellen McDevitt, Barbara M. Wright, Stefan Carter, William T. Foley, and Irving S. Wright, New York, N. Y.


PANEL: The Recognition and Management of Cardiac Arrhythmias

George R. Herrmann, Galveston, Tex., MODERATOR.
A. Carlton Ernstein, Cleveland, Ohio
Richard H. Lyons, Syracuse, N. Y.
Maurice Sokolow, San Francisco, Calif.

Business Meeting: Section on Clinical Cardiology

Basic Science and Circulation

Music Hall Ballroom—2:00 P.M. to 5:30 P.M.

General and Regional Circulatory Responses to Induced Acidosis and Alkalosis. David W. Richardson and John L. Patterson, Jr., Richmond, Va.

Reaction of an Occluded Artery During Normal and Abnormal Valsalva Responses. Stuart Bondurant and John M. Wallace, Durham, N. C.

Early Detection of Retinal Vascular Abnormalities in Diabetes Mellitus. John B. Hickam and Herbert O. Sieker, Durham, N. C.


Experimental Arteriosclerosis Due to Combinations of Hypercholesterolemia and Hypervitaminosis D. Richard E. Trueheart, Marjorie Stumpe, and George M. Hass, Chicago, Ill.


Responsiveness of Vasomotor Receptors in Major Vascular Beds. Harold D. Green and Adam B. Denison, Jr., Winston-Salem, N. C.

Rationale of Venous Occlusion Plethysmography. Paul F. Formel and Joseph T. Doyle, Albany, N. Y.

Cardiac Myosin. John Gergely, Mary A. Gouwea, and Heinz Kohler, Boston, Mass.


Rheumatic Fever and Congenital Heart Disease

Music Hall North Arena—2:00 P.M. to 5:30 P.M.
Medical Motion Pictures

DAILY PROGRAM
OCTOBER 27, 28 and 29, 1956

MUSIC HALL

9:30 A.M. to 12:00 NOON

9:30 The First Heart Beats and the Beginning of the Circulation of the Blood in the Embryo (Silent, Black and White)
Bradley M. Patten, M.D., and Theodore C. Kramer, M.D., University of Michigan, Ann Arbor, Mich.

10:00 Resuscitation for Cardiac Arrest (Color, Sound)
Claude S. Beck, M.D., David S. Leighton, M.D., and Kenneth Wolfe, M.D., Western Reserve University, Cleveland, Ohio.

10:20 Surgical Correction of Interventricular Septal Defects Employing Cross Circulation (Color, Sound)
C. Walton Lillehei, M.D., Morley Cohen, M.D., Herbert E. Warden, M.D., and Richard L. Varco, M.D., University of Minnesota, Minneapolis, Minn.

10:40 Preliminary Observations on the Circulation of the Giraffe (Color, Sound)
R. H. Goetz, M.D., Capetown, South Africa

11:25 Hepato-Jugular Reflex (Color, Sound)
J. Marion Bryant, M.D., New York, N. Y.

2:00 P.M. to 5:00 P.M.

2:30 Heart Catheterization and Cardioangiography in Congenital Heart Disease (Silent, Black and White)
F. Mason Sones, Jr., M.D. Cleveland Clinic, Cleveland, Ohio.

3:15 Secrets of the Heart (Sound, Black and White)
American Heart Association, New York, N. Y.

3:45 Living Microscopic Blood Vessels: Normal and Pathological Conditions (Color, Silent)
Benjamin R. Lutz, M.D., and George P. Fulton, M.D., Boston, Mass.

4:15 William Harvey and the Circulation of the Blood (Silent, Black and White)

In a series of over 700 prothrombin determinations in normal plasmas and those from patients individually maintained on a variety of 8 anticoagulant drugs, the TAME assay agreed closely with the 2-stage method. Its reliability and technical simplicity make it a satisfactory technic for routine clinical use. (Booth S-98)

Operation for Coronary Artery Disease. Claude S. Beck, David S. Leighninger, and Bernard L. Brofman, Cleveland, Ohio.

This exhibit is based upon 25 years of laboratory experience and more than 300 patients operated for coronary artery disease. Heart models demonstrate the stages of a heart attack and the protection of intercoronary communications provided by operation. Selection of patients, low operative mortality, and excellent results are presented. (Booth S-20)

Carotenoid Pigments in Atherosclerosis. David H. Blankenhorn and Harvey C. Knowles, Jr., Cincinnati, Ohio.

The exhibit will demonstrate the interrelationship of carotenoids and cholesterol in human atherosclerosis. Possible implications of the presence of these exogenous lipids in atherosclerosis will be shown. (Booth S-105)

Repair of Interatrial Septal Defects. Lewis H. Bosher, Jr., Richmond, Va.

The technic of repairing interatrial septal defects by circumclusion will be illustrated in detail by drawings and photographs. Summary of all cases operated upon including 12 repaired by circumclusion will be presented, together with supporting physiologic data. (Booth S-97)


Based on the concept that continuous antibiotic prophylaxis following an initial attack of rheumatic fever reduces the risk of progressive heart disease, a narration of the histories of 2 cases of rheumatic fever is presented. Prophylaxis is followed by the first patient and 3 years later there is little heart damage. The second patient, however, does not follow the prophylactic regimen and has severe rheumatic heart disease 3 years later after several recurrent attacks of rheumatic fever. The narration is illustrated in each case, “before and after,” by the use of electrocardiograms, phonocardiograms, heart sounds and phantom hearts. (Booth S-56)

Control of Physiologic Variables in Total Body Perfusion. Leland C. Clark, Samuel Kaplan, and Edward C. Matthews, Cincinnati, Ohio.

An artificial heart-lung machine will be demonstrated while it is oxygenating and pumping saline. The method of oxygenation is by bubbling and coalescence on a polymethylsiloxane surface. Pumping is accomplished by an alternating suction and pressure is controlled by 2 electrodes which actuate 2 solenoid valves. The value of continuous recording of arterial and venous oxygen tension and arterial pH during perfusion will be demonstrated. (Booth S-107)


The authors have introduced a new method of evaluating the functional significance of the collateral coronary circulation by simultaneous measurement of both the retrograde and antegrade flows of the anterior descending artery in the dog’s beating heart. They will demonstrate the salutary effect of restoring the blood pressure in simulated coronary occlusion with hypotension and also the deleterious effect of the arrhythmias on both the antegrade and retrograde coronary flow. (Booth S-85)


A clinical method of grading the severity of obliterative arterial disease of the lower extremity, the incidence of each grade, and the effect of azapetine phosphate, reflex vasodilation, and tibial nerve block on the toe temperature of extremities in each grade, are presented. Representative digital plethysmograms using a new electronic plethysmograph are included. (Booth S-112)


The results of a study of 71 patients with hypertensive disease, the majority with moderately severe
or severe essential hypertension, and 4 with malignant or accelerated phase. Indications and contraindications for use of Rauwolfia serpentina, hydralazine, and ganglionic blocking agents, such as hexamethonium, pentolium, mecamylamine and chlorisondamine are discussed. New data on prognosis of treated patients are presented.

(Booth S-111)

Special Cardiopulmonary Technic: Unilateral Pulmonary Artery Occlusion and Intracardiac Angiography. John C. Elder, Bernard L. Charms, and Bernard L. Brofman, Cleveland, Ohio.

By means of a triple lumen catheter with inflatable cuff, unilateral pulmonary artery occlusion has been performed in 100 patients, providing hemodynamic data. Instantaneous controlled release of contrast material in the heart chambers for intracardiac angiography is achieved by a method using a balloon-tipped catheter. X-rays and transparencies are presented.

(Booth S-109)

Gangrene of Legs and Feet Treated by Walking. William T. Foley and Staff of the Vascular Clinic of New York Hospital-Cornell University Medical College, New York, N. Y.

The exhibit consists of 48 full color transparencies shown on a screen by an automatic projector. Case histories of patients with gangrene of the legs, feet and toes from arteriosclerosis obliterans, embolization and thromboangitis obliterans are presented. Conservative therapy with weight bearing and walking resulted in healing of the necrotic areas. The photographs are alternated with running commentary.

(Booth S-91)


The exhibit is based on a 9 year study of over 900 separate angiocardiograms, each consisting of from 12 to 25 plates. The incidence and the original angiocardiograms of the cyanotic and noncyanotic types of congenital malformations of the heart, as well as colored drawings of these angiocardiograms and of the hemodynamics of each entity, are demonstrated. Legends explaining each angiocardiogram are included.

(Booth S-96)


The concept of circumferential constriction or “purse-stringing” of the cardiac valves for the relief of insufficiencies has been studied experimentally in our cardiovascular research laboratory at Presby-

terian Hospital for the past 3 years. The rationale of its application and the anatomic basis for such a procedure have resulted in a surgical technic for its performance that is both feasible and safe. The advantages of this procedure include the fact that this operation does not require the introduction of foreign material across the lumen of the cardiac chambers. It also involves no more intracardiac manipulation than does a commissurotomy and results in no significant myocardial trauma. This principle, with or without concomitant commissurotomy, appears applicable to most forms of mitral insufficiency. This exhibit depicts the pathology and physiology of the lesion under question, the technic of the operative approach, the 3 year experimental background, and its more recent clinical application. Results to date are detailed. Charts, photographs and drawings are employed to illustrate the compiled data.

(Booth S-86)

Ceramic Heart Models as Teaching Aids. David Goldring, M. Remsen Behrer, and Evelyn Goldring, St. Louis, Mo.

Ceramic models of the more commonly seen congenital cardiac anomalies will be displayed. Blood flow diagrams, pertinent history relating to the patients, as well as photographs of x-rays and electrocardiographic findings, will supplement the display. The use of clay as the medium for the construction of moulages is inexpensive. These models have been found to be extremely useful as teaching aids.

(Booth S-63)

Occlusion of a Coronary Artery. Béla Halpert, Ethel E. Erickson, and Ferenc Gyorkey, Houston, Tex.

Among 1800 male patients, 1344 white and 456 Negro, occlusion of a coronary artery with infarction or extensive scarring of the myocardium occurred in 165 of the white and 30 of the Negro subjects. Of the 195 patients, 97 died of the first attack immediately or within 3 months.

(Booth S-8)

Experimental Production of Cardiac Anomalies. Olga M. Haring, John F. Polli, and Herbert D. Trace, Chicago, Ill.

The exhibit will demonstrate by means of colored microphotographs (8” x 10”) some of the congenital abnormalities of the cardiovascular system in rats from mothers exposed during pregnancy for specified periods to an increased CO2 tension. Photographs of the hearts in normal control animals will also be exhibited. Charts describing the method will be shown.

(Booth S-106)

Analysis of Results of Arterial Grafting. A. W. Humphries, V. G. de Wolfe, and F. A. LeFever, Cleveland, Ohio.

This exhibit analyzes the results of 150 consecutive cases of major arterial grafting in terms of immediate
and late results. The typical history and physical findings are noted and examples of angiography are shown.

(Booth S-26)

Direct Vision Intracardiac Surgery Utilizing the Mechanical Pump-Oxygenator. Earle B. Kay and Frederick S. Cross, Cleveland, Ohio.

The exhibit is designed to show the present status of direct vision intracardiac surgery for certain congenital heart defects with the use of a mechanical pump oxygenator. The details of the oxygenator and the extracorporeal circuit will be shown in 1 panel. Another panel lists the various lesions for which direct vision intracardiac surgery is indicated, with the lesions being illustrated by kodachrome transparencies. A third panel lists the advantages of open surgery utilizing kodachrome transparencies and charts for illustration. A fourth panel illustrates the technic of the surgical procedure with kodachrome transparencies showing the intracardiac lesions before and after surgical correction. A final panel will list the results of surgery to date. The majority of this material is illustrated by means of transparencies and indirect lighting.

(Booth S-87)

The C-Reactive Protein Determination in Heart Disease. Irving G. Kroop and Nathan H. Shackman, Brooklyn, N. Y.

In the absence of other extracardiac stimuli for its formation, the serum C-reactive protein determination is a sensitive index of myocardial necrosis and inflammation in rheumatic fever, coronary artery disease, postcommissurotomy syndrome, and viral myocarditis-pericarditis. Serum glutamic-oxalacetic transaminase levels may be within the normal range when CRP is positive in patients with minimal necrosis.

(Booth S-115)

Serum Glutamic Oxalacetic Transaminase (SGOT), Serum Glutamic Pyruvic Transaminase (SGPT), and Lactic Dehydrogenase (LD) Alterations in Heart Disease. John S. LaDue, Felix Wroblewski, Irwin Nydick, Paul Ruesegger, and Arthur Karmen, New York, N. Y.

This exhibit describes the alterations of serum glutamic oxalacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), and lactic dehydrogenase (LD) in heart disease with a brief description of changes in some forms of liver disease. It will be shown that in the absence of acute damage of heart muscle, skeletal muscle or liver, the activity of these enzymes is not changed in infectious, degenerative, toxic, allergic, reactive or metabolic disease states. Both serum glutamic oxalacetic transaminase and lactic dehydrogenase rise promptly within 12 hours and may persist for as long as 6 days following acute myocardial infarction. Angina pectoris and coronary insufficiency per se do not cause any change in these enzymes. Experimental and clinical data will be demonstrated to show the usefulness of these procedures in heart disease.

(Booth S-110)

Vectorcardiography. Lawrence E. Lamb, Randolph Air Force Base, Tex.

The relation of vectorcardiograph size to cardiac size is apparent from 3 dimensional models constructed in terms of electric moment. Models demonstrate derived potential equivalent (wave front volume, density of charge), and energy equivalent (volume, density of charge, wall thickness), differences in children, adults, olympic athletes, and disease states.

(Booth S-49)


Review of 504 clinical cases of cirrhosis showing that: 1. Hypertension does not usually occur with cirrhosis. 2. Stress may produce temporary hypertension. 3. Renal hypertension and cirrhosis are not incompatible. 4. Established hypertension was found to revert when cirrhosis develops, with a coincidental reversal of A/G ratio.

(Booth S-101)


The exhibit includes a demonstration and exhibition of professional services and educational materials that the American Heart Association has available for physicians. These educational aids, including Cardio-Views, Cardiac Clinic Albums, Tape Library of Heart Sounds and Murmurs, and display of pertinent cardiovascular publications, will be demonstrated to physicians visiting the exhibit.

(Booth S-95)


A graphic portrayal of the incidence, life history, symptoms, clinical findings and laboratory data as related to the diagnosis of atrial septal defects. One-fourth devoted to differential diagnosis (including recorded murmurs) and one-third to the surgical experience in the operative repair of 25 cases under hypothermia.

(Booth S-108)

The Range of Blood Pressure in Apparently Healthy, Ambulatory People Sixty-Five Years of Age and Over, Without Heart Disease. Arthur M. Master, Richard P. Lasser, and Harry L. Jaffe, New York City, N. Y.

The results of a survey of the blood pressure in people over 65 years of age, who were apparently
healthy, noninstitutionalized and without cardiac disease, are presented. The mean values, frequency distribution curves and relationship to age, sex, weight, height, occupation, and geographic location are shown.

(Booth S-37)


An exhibit demonstrating nonpenetrating injuries of the heart and aorta due to trauma in which the clinical findings are correlated with the pathology with emphasis on the pathologic features of myocardial contusion and rupture.

(Booth S-102)


Rats eating increased sodium chloride showed impaired growth, hypertension, hypercholesterolemia, edema, renal and cardiac failure, increased radiosodium space, abnormal electrocardiograms, accelerated mortality and widespread arteriosclerosis directly proportional to salt intake. Extra potassium was protective, diminishing the severity of hypertensive disease and significantly prolonging life. Dogs now show impaired growth, hypercholesterolemia.

(Booth S-99)


A summary of the actions and therapeutic indications of the newer antihypertensive agents is presented. Results of long term treatment of a large group of patients with severe hypertension is reviewed. Practical consideration and limitations in the use of the rauwolfia compounds, Apresoline, Ansolysen, Ecolid and mecamylamine (Inversine) will be summarized.

(Booth S-116)


The exhibit describes the technic of body section radiography and its application to the study of the heart and great vessels. It is helpful in delineating the enlarged left atrium when it is not clearly demonstrated on conventional roentgenogram, in the differentiation of vascular shadows from other intrathoracic masses, and in the demonstration of intracardiac calcification.

(Booth S-92)


Exhibit will consist of charts describing the propagation of premature atrial and ventricular beats and in the retrograde direction. An electronic model of the proposed dual transmission system will be used to illustrate possible mechanisms of reciprocal rhythm and supraventricular paroxysmal tachycardia.

(Booth S-104)


Phenoxyethyl penicillin (penicillin V) is shown to produce greater and more prolonged blood levels than penicillin G when given by the oral route. In doses of 1200 mg., every 4 hours, it results in penicillin blood concentrations equivalent to certain high dosage regimens of parenteral penicillin. The use of massive doses of penicillin V in treatment of 10 cases of bacterial endocarditis is demonstrated.

(Booth S-114)

Heart Pain: Mechanisms and Relief. Joseph T. Roberts, Buffalo, N. Y.

Heart pain from ischemic vasa nervorum has many predisposing, precipitating causes. Relief is helped by many situational and general medical mechanisms; also by long-term low level anticoagulants and vasodilators, group therapy and revascularization (direct and indirect methods). Thebesian vessels can carry blood in either direction. Endocardial punctures or left ventricular implants (of coronary sinus, venous or arterial segments) can connect with coronary vessels. Heart's lymphatics are dynamic drainage channels.

(Booth S-99)

Vascular Modifications Induced by Flow. Simon Rodbard and Francis Williams, Buffalo, N. Y.

Flow in deformable channels is shown to generate plaques which metamorphose into structures resembling valves and stenoses, with poststenotic vascular dilatations. Under certain conditions the lining of the channel is "dissected" from the wall. The important potential role of hydraulic forces in the structural development and pathologic degeneration of the cardiovascular system is suggested.

(Booth S-90)


A heart-lung machine with large flow capacity (4500 ml./min.) will be shown. This machine controls blood pH. There are no air bubbles. The coronary and spilled blood is returned to the machine. The
machine is compact and semiautomatic. It has been successfully used in large human patients. (Booth S-12)


In acquired cardiac disease the diagnostic uses of cardiac catheterization involve more comprehensive technics than in congenital heart disease which include a detailed analysis of pressure curves, determination of cardiac output and the use of exercise tests. The exhibit presents a summary of normal and abnormal ranges of cardiac pressures, pressure curves, pressure gradients and cardiac output at rest and during exercise. Four illustrative differential diagnostic cases are also presented. (Booth S-100)

Combined Heart Catheterization and Selective Cardioangiography in the Study of Congenital Heart Lesions. F. Mason Sones, Jr., Cleveland, Ohio.

Films covering the major cyanotic and noncyanotic congenital heart lesions will be shown continuously or intermittently. These films will demonstrate the details and technics involved in high-speed optical photography and televised fluoroscopy for heart catheterization and selective cardioangiography. The technic will also be described on 4 panels. (Booth S-93)

What the Cook Can Do about Obesity. Eugene A. Stead, Jr., Evelyn Stead, and Gloria Warren, Durham, N. C.

By training the cook, fat and caloric intake can be reduced without sacrifice in the pleasures of eating and without decreasing the quantity of food eaten. An average intake of 25 Gm./day of fat is practiced. Because most medical indications for weight reduction are lifelong, low-fat cookery is a better solution than the usual reduction diet. (Booth S-103)

Cardiac Effects of Athletic Work Stress. John W. Wilce, Columbus, Ohio.

A 27-year study of the hearts of 237 personally known American athletes is presented. Original postulates presented to the American Heart Association in 1942, “The Range of the Normal Heart in Athletes” are elaborated and modernized, supplying additional background for improved cardiac guidance. (Booth S-30)

Heart-Vector: Twelve Topics on Four Panels, with a Three-Dimensional Visual Model. Zang Z. Zao, Robert B. Crouch, Milton R. Hejmancik, and George R. Herrmann, Galveston, Tex.

Panel I gives Einthoven triangle in circular form; by using the latter a total of 10,000 electrocardiograms have been studied. It has been concluded that the visual method is advantageous in clinical routine. Panel II gives the quantitative relationship between the Einthoven triangle and the Burger triangle in its various shapes. By using this correlation the influence of heart-vector eccentricity and length on the inaccuracy of the Einthoven triangle is visualized. This panel in addition shows: the direct construction of Burger triangles from living toad hearts in situ; the almost identity of QRS and T triangles from same toads, and the simplification of the use of Burger triangle. Panel III illustrates 2 diagrams that easily give simultaneous results from the Einthoven triangle and the “normal” Burger triangle. The Burger triangle of other shapes (e.g., in bundle-branch block, premature beats) may be added to Diagram B in curve form. These diagrams may also be used to convert Einthoven data into Burger data at a glance. Panel IV gives examples of vectorcardiographic forms taken with Wilson tetrahedron (which has no correct physical foundation) and those from the same patients with the same electrode places after applying Burger coefficients (which have correct physical foundation). Clinical usefulness of the latter method is stressed. (Booth S-88)
TECHNICAL EXHIBITS

South Wing, Exhibition Hall

Adolph's Ltd., Los Angeles, Calif. (Booth 72). Register at Booth 72 for your free copies of Adolph's new Sodium Calculator—patient's pocket guide to exact sodium content in average household portions of familiar foods, free samples of Adolph's Salt Substitute. Looks, seasons, sprinkles, and satisfies like salt. Will not cook out, bake out, or freeze out.

Arlington Medical Company, Arlington Heights, Ill. (Booth 41), will exhibit the Lectron-O-Scope, a pocket-size amplifying stethoscope which amplifies body sounds permitting easier, quicker, more accurate diagnosis. A tone selector permits selection of tones, cardiac-pulmonary. The Lectron-O-Scope is of value in determining character and quality, not only of sounds of heart and chest, but also those of the abdomen and fetal heart beats. It is a completely self-contained unit in a smart, lightweight pocket-size case.

The Birtcher Corporation, Los Angeles, Calif. (Booth 65), proudly announces the premier showing of the new Heartalarum. This new operating room warning device furnishes aural and visual instantaneous record of the patient's heart activity and signals a warning within 5 sec, after simple cardiac standstill or fibrillation has occurred. Heartpacers and defibrillators will be shown.

Bowen & Company, Inc., Bethesda, Md. (Booth 29). Actual demonstrations of their accurately Calibrated Ballistocardiograph, Smith-Perls Model, will be presented. Additional products displayed will be: Welsh Self-Retaining Electrodes; QT Calculator for determining the QTc and the QT ratio; Bowen Liquid Dispenser for alcohol and other cleaning liquids. Newest item will be the Krasno-Graybiel Metal Plasterodes, a metal and plaster electrode requiring NO electrode paste (jelly).

Brewer & Company, Inc., Worcester, Mass. (Booth 19). This exhibit consists of specialties centering around Thesodate, the original enteric-coated tablet of thebromine sodium acetate. Also Brewer capsules and ampuls, other specialties including Sudzinz (sodium succinate—Brewer) and standard pharmaceuticals manufactured by Brewer & Company, Inc., including a complete line of vitamin preparations for internal use and injection. Amchol, enteric-coated, 1 Gm. tablets of ammonium chloride and Enkide, enteric-coated tablets of potassium iodide, are also featured. In addition, the company's representatives will feature Asteric, a special enteric-coated aspirin for massive dosages; Gel-Ets, the newest mode in oral vitamin therapy. Literature will be available on the new Brewer specialties, Injectable Quinidine Hydrochloride (original injectable quinidine product on the American market for both intravenous and intramuscular use), and Sus-Phrine (aqueous suspension of epinephrine 1:200—Brewer) for subcutaneous injection in the treatment of bronchial asthma.

The John Bunn Corporation, Buffalo, N. Y. (Booth 1). Featured will be the RV-3 Befrigomatic high humidity oxygen tent. This tent provides not only 3 choices of relative humidity but also oxygen in higher concentrations than have ever been possible before with tent therapy. See also the Cardi-Cator which Monitors the heart beat during surgery. Try the Pocketaire portable oxygen unit.

The Burdick Corporation, Milton, Wis. (Booth 16), will exhibit their modern line of Electrocardiograph equipment. Doctors are invited to see these units in operation and also to inspect the unit encased in transparent plastic.

Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N. Y. (Booth 53). The extensive research facilities of Burroughs Wellcome & Company, both here and in other countries, are directed to the development of improved therapeutic agents and techniques. Through such research Burroughs Wellcome & Company has made notable advances related to leukemia, malaria, diabetes, and diseases of the autonomic nervous system; and to antibiotic, muscle-relaxant, antihistaminic, and antinauseant drugs. An informed staff at the booth will welcome the opportunity to discuss their products and latest developments with you.

Cambridge Instrument Company, Inc., New York, N. Y. (Booths 67–68). The new Cambridge Audio-Visual Heart Sound Recorder; the well-known Cambridge “Simpli-Scribe” Model Direct-Writing Portable Electrocardiograph and the Cambridge Standard String Galvanometer Electrocardiograph, both in the “Simpli-Trol” Portable and the Mobile Model Electrocardiograph-Stethograph with Pulse Recorder, will be displayed at this booth. Also, other important Cambridge instruments, including the Operating Room Cardioscope, Educational Cardioscope, Multi-Channel Direct-Writing Recorder, Electrokymograph, Plethysmograph, and pH Meters. The Cambridge Engineers in attendance will be glad to give you complete information on these instruments.

Carnation Company, Los Angeles, Calif. (Booth 33), presents Carnation Instant Non-fat Dry Milk Solids, the first and only true instant non-fat dry milk. The “Magic Crystals” process, which has resulted in instant solubility and fresh flavor, won the
1955 Food Engineering Award for the year's major advance in food processing. You are cordially invited to sample this fine product, an excellent, economical source of protein.

Ciba Pharmaceutical Products Inc., Summit, N. J. (Booth 61). The CIBA exhibit features Serpasil—the original, pure crystalline alkaloid of rauwolfia. Serpasil has been found extremely useful as a tranquilizer in treating patients whose adjustment to life is complicated by anxiety, irritability, and various psychoses. Patients feel calm, yet in properly adjusted doses retain their drive and energy. It is highly effective in many conditions where barbiturates have been commonly prescribed.

The Coca-Cola Company, Atlanta, Ga. (Lounge). Ice-cold Coca-Cola will be served through the courtesy and cooperation of the Coca-Cola Company.

The Colson Corporation, Elyria, Ohio (Booth 14).

Dallons Laboratories, Inc., Los Angeles, Calif. (Booth 51), will display the CS 8-5 Cardioscope and demonstrate its operation for continuous monitoring of cardiac potentials during surgery. A component, The Dallons CP 3-6 Cardiophone will also be demonstrated. The Cardiophone produces clear and distinct tones of the heart rhythm and any deviation or cardiac arrest is immediately discernible. The Cardiac Defibrillator and Cardiac Pacemaker will also be shown. Competent factory representatives will be on hand to answer your questions. You are cordially invited to visit their booth.

Darwin Laboratories, Los Angeles, Calif. (Booth 81). Heparin Sodium USP (Lipo-Hepin*) in concentration and ampul size allowing a single daily injection for the 1-hour anticoagulant effect regardless of the patient's weight. Product is ready to administer without prewarming and is economical to use. Trypsin Solution and Saliva (Trypto-Pilez and Dar-Zyme) for topical pepsicolytic digestive effect on necrotic and nonviable tissue. Product is ready for use without mixing.

Davies, Rose & Company, Limited, Boston, Mass. (Booth 15), cordially invite you to visit their booth. Although most physicians need no introduction to their outstanding cardiac therapies, Pil. Digitalis and Tablets Quinidine Sulfate, Natural, their representatives, Messrs. Houghton Y. Orme and W. Earle Purinton, will be on hand to greet you and to explain the dependability of their laboratory productions.

E & J Manufacturing Company, Burbank, Calif. (Booth 69).

Electrodyne Company, Inc., Norwood, Mass. (Booth 10). On display will be the latest equipment for detection and treatment of cardiac arrest, ventricular fibrillation and other cardiac arrhythmias. Featured will be the Electrodyne PM-65 with electrocardioscope and the Electrodyne D-72 (the External Defibrillator). Electrodyne representatives will be pleased to demonstrate these instruments for you.

Electronics For Medicine, Inc., White Plains, N. Y. (Booth 13) will exhibit a new Eight Channel Cathode Ray Research Recorder for observation and measurement of vascular and respiratory pressures, ECG, BCG, vectors, dye curves, blood oxygen and other phenomena; a Cardiology Teaching Aid for Simultaneous Observation, tape recording and photographing of heart sounds and ECG or pulse wave; a new Cardiotachoscope with greater portability and simplified controls.


Encyclopaedia Britannica, Chicago, Ill. (Booth 54).

The Evron Company, Inc., Chicago, Ill. (Booth 3). One Pentritol Tempule* every 12 hours assures 24-hour protection from anginal attack in most patients. A 10 mg. release of PETN every four hours maintains continuous coronary vasodilation, eliminating all dangerous medication gaps. Only Pentritol Tempules offer the protection of 24-hour uninterrupted prophylaxis. Samples and literature will be offered at the Evron booth.

Grass Instrument Co., Quincy, Mass. (Booth 45), exhibits for the first time, in order to present a new concept in instrument design—their Model 5 Polygraph—which has so much to offer in both research and clinical cardiology. The Model 5 Polygraph combines versatility with precision. Interchangeable preamplifiers permit recording of blood pressures, oxygen saturation, plethysmogram, respiration, temperature, skin resistance, ECG or heart rate, the EEG, CO2, etc. Driver amplifiers are identical for all channels, and combine with Grass ink-writing oscillographs to provide an inexpensive yet extremely accurate continuous direct recording. Qualified personnel will be on hand to discuss your requirements.

Grune & Stratton, Inc., New York, N. Y. (Booths 77-78). Mr. Frank Kurzer welcomes you to their exhibit where you can examine such important books as Gordon's Clinical Cardiopulmonary Physiology; Brecher's Venous Return; Luiska and Liu's Cardiac Pressures and Pulses; the 2nd revised and enlarged edition of Storch's Fundamentals of Clinical Fluoroscopy; Lyon's Virus Diseases and

* Evron's controlled disintegration capsules of 30 mg. pentaerythritol tetranitrate (PETN).
the Cardiovascular System; Brooks and associate's Excitability of the Heart; Talbott and Ferrandis' Collagen Diseases; Merrill's the Treatment of Renal Failure; and many others of great value in your daily work.

Paul B. Hoeber, Inc., New York, N. Y. (Booth 66). Be sure to visit Booth 66 where you will find advanced copies of the Hoeber-Harper Series in Cardiology—5 small volumes from the Second World Congress of Cardiology. You will also want to see Gardberg's Interpretation of the Electrocardiogram, Abramson's Diagnosis and Treatment of Peripheral Vascular Disorders, Wilkinson's Modern Trends in Blood Diseases, Luisada's The Heart Beat, Stewart's Cardiac Therapy, Dotter and Steinfberg's Angiocardiography. A complete selection of Hoeber-Harper books will be on hand for your personal study.

Instant Sanka Coffee, White Plains, N. Y. (Booths 27-28). It is a pleasure for General Foods to feature and serve Instant Sanka at this year's convention of your Association. Instant Sanka is 100 per cent pure coffee with 97 per cent of the caffeine removed. Won't you stop by for a cup often between meetings? And be sure to register for professional samples and copies of the booklet, What Every Coffee Lover Should Know About Caffein.

Irwin, Neisler & Company, Decatur, Ill. (Booth 24). Doctor, if you use aminophylline, you will be interested in Cardalin . . . a protected aminophylline which permits high oral dosage with a minimum of side actions. Two protective factors effectively minimize gastric irritation so common with other forms of aminophylline. Your Neisler exhibit representative has complete details.

Ives-Cameron Company, Philadelphia, Pa. (Booth 34). You will find on display a new chloral hypnotic-sedative, Pericl, as well as Monichol, the first satisfactory medication for the normalization of elevated serum cholesterol levels as associated with cardiovascular disease, diabetes, etc. Ask their representative for information on Duotinic, a nonconstipating hematinic for the treatment of nutritional anemias; Oxzorbil, for the management of fat intolerance dyspepsia; Mucara, for the relief of chronic constipation, and other outstanding Ives-Cameron specialties.

"Junket" Brand Foods, Little Falls, N. Y. (Booth 39). Valuable new information on the sodium content of the "Junket" Brand Rennet Product is available. Learn the place of nourishing "Junket" rennet-custards in the restricted diet of your cardiac patients. You are invited to register for literature giving sodium and caloric values, and professional samples.

Key Corporation, Miami, Florida (Booth 64), is exhibiting Nitroglyn Tablets, which very recently published medical data shows to be highly effective in the management of angina pectoris, and very well tolerated by the patients. The work reported upon includes studies conducted at New York Medical College, Flower Fifth Avenue Hospital, Mount Sinai Hospital, and Goldwater Memorial Hospital, all of New York City. Reprints of all of these published papers are available at the Company's exhibit.

Lea & Febiger, Philadelphia, Pa. (Booth 71). Be sure to see these 1956 and other recent books: Katz and Pick Clinical Electrocardiography; Goldberger Heart Disease; Goldberger Unipolar Lead Electrocardiography; Master, Moser and Jaffe Cardiac Emergencies and Heart Failure; Master, Garfield and Walters Normal Blood Pressure and Hypertension; Burch and Winsor Primer of Electrocardiography; Burch Cardiology; Bailey Surgery of the Heart; Pratt Cardiovascular (Artery and Vein) Surgery; and many other titles of interest to you.

Lederle Laboratories Division, American Cyanamid Company, Pearl River, N. Y. (Booth 83). You are cordially invited to visit their booth where representatives will be in attendance, prepared to answer questions on the products and services offered by their organization. They hope you will stop and see them.

Eli Lilly and Company, Indianapolis, Ind. (Booths 31-32). You are cordially invited to visit the Lilly exhibit. The display will contain information on recent therapeutic developments. Lilly sales people will be in attendance. They welcome your questions about Lilly products.

The Macmillan Company, New York, N. Y. (Booth 79), will exhibit a representative list of medical books from its extensive publishing program. Featured will be the books of some of the outstanding authors in the field of cardiology.

The Maico Company Incorporated, Minneapolis, Minn. (Booth 62), will have on display their miniaturized electronic amplifying stethoscope, the Maico Stethetron. This instrument can amplify body sounds 10,000 times if this is desired. Experienced personnel will be on hand to show you this fine new instrument.

Micro X-Ray Recorder, Inc., Chicago, Ill. (Booth 50). New series of 35 mm. 2" x 2" slides for lectures, teaching and reference is included in the exhibit. Series on Electrocardiography (2 sets) prepared by Dr. Travis Winsor, and Angiocardiography by Dr. Charles T. Dotter are featured, as well as series on other subjects. These slides are miniature reproductions produced on the Micro X-ray Recorder from original material compiled from the files of leading institutions. The Micro X-Ray Recorder, a micro-
filming unit that will record x-rays, photographs, charts, ECGs, case histories and specimens on a 100 foot roll of 85 mm. film is also featured. The Micro X-Ray Recorder Viewers, Readers, Projectors, Indexers, 35 mm mounts and other accessories are also shown.

Miles Reproducer Co., Inc., New York, N. Y. (Booth 38). Case histories, house calls, hospital rounds, lectures, conferences, group therapy, interviews, and dictation may now be recorded at a 60-foot radius with Walkie-Recordall, Briefcase-Conference-Recorder, a lightweight self-powered battery-recorder-transcriber. It operates in or out of the closed briefcase; in car, train, plane while mobile or stationary. Records clearly in noisy places, as interferences do not block recording. No installation or acoustical room conditions required. The Voice-Activated "Self-Start-Stop" feature automatically starts and stops the recording from microphone or telephone, thus eliminating supervision and the recording of silent periods. While facilities for transcribing are available, transcription may be eliminated due to ease of handling identifiable, compact, indexed recordings without rewinding. Up to 8 hours of permanent recordings may be accumulated at intervals on an endless belt costing $25.

The C. V. Mosby Company, St. Louis, Mo. (Booth 35) will exhibit its complete line of medical publications. Featured among the fiftieth Anniversary Releases will be: Sodi-Pallares New Bases of Electrocardiography, Myers Interpretation of the Unipolar Electrocardiogram, and Meakins Practice of Medicine. Also the new edition of Bard Medical Physiology.

Nepera Chemical Co., Inc., Yonkers, N. Y. (Booth 70). The exhibit features a new xanthine drug, Chole-dyl, which has proven highly effective, when used orally, as a mild, nonmercurial diuretic in the treatment of congestive heart failure. It is also useful in the treatment of angina pectoris and asthma. Chole-dyl assures high theophylline blood levels orally, with minimal side reactions; it rarely produces fastness. Their representatives welcome inquiries regarding this new and unique preparation.

North American Philips Company, Inc., Mount Vernon, N. Y. (Booth 82). Reflecting the ever-increasing interest in this comparatively new technic, their display will consist of the Philips Image Intensifier with 8 separate viewing systems: a mirror viewer, cineradiographic hook-up and a closed circuit television execution.

Original Contour Chair-Lounge, Cincinnati, Ohio (Booth 47). The Original Contour Chair-Lounge is designed for perfect comfort, for healthy enjoyable relaxation... supporting every part of the body, resting all the muscles at once. It is available in a complete assortment of sizes carefully scaled to fit the varying requirements of all physical proportions, along with a massage unit to increase the circulation, massage the entire body, and stimulate the nerves.

Pet Milk Company, St. Louis, Mo. (Booth 25). Representatives will be on hand to discuss the merits of the new Instant Pet Nonfat Dry Milk. They will be pleased to have you stop and discuss its many uses. Literature will be mailed to your office upon request.

George P. Pilling & Son Company, Philadelphia, Pa. (Booth 76). The exhibit will consist entirely of surgical instruments for cardiac surgery, along with a limited number of the newer designs in thoracic surgery instruments as well as bronchoscopy. The exhibit should prove extremely interesting to all chest surgeons, as well as anyone doing bronchoscopy either diagnostic or operative.

The Pitman-Moore Company, Indianapolis, Ind. (Booth 36). Their display will feature Veralbo-R, the original combination of protovatrinases with reserpine. This combination affords "physiologic control" of most forms of hypertension without interruption of normal body processes. Physicians are cordially invited to visit the display for additional information on this important specialty.

Raytheon Manufacturing Company, Waltham, Mass. (Booth 17). Their exhibit highlights a new, direct-writing electrocardiograph, available on the market this month for the first time. Mounted in an attractive leather case, the instrument includes unique design features such as instantaneous stabilized lead switching, a specially-designed cartridge to facilitate paper changing, and unitized plug-in construction to simplify servicing. See and try this new ECG.

Riker Laboratories, Inc., Los Angeles, Calif. (Booth 11), invites you to visit their booth for the latest, complete information on several products widely used in the cardiovascular field of medicine: Pentoxy-lon for angina pectoris; Rauwolfoid, Rauwolfia + Veriloid and Rauwolfoid + Hexamethonium for the varying degrees of hypertension. Your visit will be appreciated. Make Booth 11 your headquarters.

Sanborn Company, Cambridge, Mass. (Booths 5-6), will feature a continuous demonstration of varied equipment for visualization (via oscilloscope) and recording (direct-writing and photographic) of a wide range of biophysical phenomena. A major highlight will be the showing of the new Sanborn Physiologic Pressure Transducer, which permits direct measurement of either differential or single pressures. Also included in the display will be Sanborn "150 Series" recording systems (available in 1-, 2-, 3-, 4-, 6- and 8-channel models); Sanborn Viso-Scopes, for routine monitoring and for operating room use;
the Electronic Switch, for multi-channel viewing on a single Viso-Scope; the Sanborn Vector System; the famous Viso-Cardielle and Metabolator, and other Sanborn equipment for cardiovascular diagnosis and research.


G. D. Searle and Co., Chicago, Ill. (Booth 43) cordially invites you to visit their booth where representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Nilevar, the new anabolic agent; Mictine, the new safe, nonmercurial oral diuretic; Vallestrol, the new synthetic estrogen with extremely low incidence of side reactions; Banhine and Pro-Banhine, the standards in anti-cholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nausea.

Sharp & Dohme, Philadelphia, Pa. (Booth 40). Exhibit features 'Inversine' mecamylamine hydrochloride, a potent and specific autonomic ganglionic blocking agent with a long duration of action. The good reproducibility of clinical effect, because of the almost complete oral absorption, provides greater ease of control of moderately severe, severe and malignant hypertension with minimal fluctuation. Expertly trained personnel will be pleased to discuss the latest summaries of advanced clinical reports in this field.

E. R. Squibb & Sons, New York, N. Y. (Booth 75), has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of their diligent research are available to the medical profession in new products or improvements in products already marketed. They are pleased to present up-to-date information on these advances for your consideration.

Statham Laboratories, Inc., Los Angeles, Calif. (Booth 18). Four types of Statham unbonded strain gage manometers intended especially for biologic measurements will be displayed by experienced engineering personnel. These 4 models of Statham pressure transducers have found wide acceptance in the field of cardiac catheterization because of their inherent stability, excellent dynamic response and simplicity of operation.

Charles C Thomas, Publisher, Springfield, Ill. (Booth 74). Their newest books in this field are: Abrams and Kaplan Angiocardiographic Interpretation in Congenital Heart Disease, de Takats Thromboembolic Disease, Holman New Concepts in Surgery of the Vascular System, White Clues in the Diagnosis and Treatment of Heart Disease (Second Edition). Their other important books in this and allied fields are also on display.

U. S. Catheter & Instrument Corp., Glens Falls, N. Y. (Booth 53), originators and sole producers of a complete line of cardiac catheters and electrodes. A research and experimental department is maintained for development of cardiac catheters in collaboration with the medical profession. The approved Edwards-Tapp nylon artery grafts and bifurcations will be displayed; also, Detergicide—quaternary ammonium germicides for catheters and surgical instruments.

U. S. Vitamin Corporation, New York, N. Y. (Booth 7). Exhibit features Arlidin, an entirely new, relatively safe and effective vasodilator drug with 3 unique pharmacologic actions: (1) dilates predominantly small blood vessels of skeletal muscle; (2) increases circulating blood volume; (3) increases cardiac output. Thus, Arlidin (Nylidrin HCl. NNR) is indicated in treating intermittent claudication and a wide range of functional and obliterative disorders of peripheral vascular insufficiency. Professional samples and literature distributed also on their complete line of nutritional and pharmaceutical specialties.

Varick Pharmaceutical Company Incorporated, New York, N. Y. (Booth 2), will feature "the original digitalin," Digitaline Nativelle. In digitalis therapy, Digitaline Nativelle attains more benefits for patient and physician. Obtain rapid, reproducible results every time with Digitaline Nativelle. Your copy of the Cardiology Desk-Aid Portfolio is available on request.


The Waters Corporation, Rochester, Minn. (Booth 73), will feature the new instant, self-developing photokymograph which gives immediate visual records without costly amplification of blood oxygen saturation as well as other physiologic phenomena. Actual operation will be demonstrated. Also presented will be the new Waters improved Nitrogen Gas Analyzer, oximeter, cardiotachometer and resistance thermometer including several unique probes.

White Laboratories, Inc., Kenilworth, N. J. (Booth 42). Gitaligin: which has been described as a
"... digitalis preparation of choice"—will be on display. White's representatives will appreciate the opportunity to discuss with you the clinical background and therapeutic merit of this and other outstanding White products.

Winthrop Laboratories, New York, N. Y. (Booth 52). Levophed, the natural anti-shock pressor hormone for patients in severe shock due to myocardial infarction. Levophed raises blood pressure within seconds. Unlike other agents, it also produces an increase in coronary blood flow and oxygen supply to the myocardium.

Wyeth Laboratories, Philadelphia, Pa. (Booths 59-60), will feature: Bicillin Injection (benzathine penicillin G) long-acting penicillin compound, valuable in rheumatic fever prophylaxis. Pen-Vee Oral (penicillin V) new acid-stable oral penicillin which produces high blood levels. Sparine (promazine hydrochloride) potent ataractic drug, indicated in management of acutely agitated patients. Equanil (meprobamate) unique anti-anxiety agent with marked muscle-relaxing properties. Ansolysen (pentolinium tartrate) effective oral ganglionic blocking agent for management of hypertension. Thiomerin Sodium (mercaptopurin sodium) injection and rectal suppositories, mercurial diuretic, virtually free of local or systemic toxicity.
CONTRIBUTORS TO THIS ISSUE

DONALD S. ABELSON, M.D.
Assistant Resident in Surgery, Montefiore Hospital,
New York, N. Y.

J. A. ABILDSKOV, M.D., CAPT. M.C., USAR
Cardiovascular Service, William Beaumont Army
Hospital, Fort Bliss, Research Consultant in
Electricity to the Schellenger Foundation, Texas
Western College of the University of Texas, El Paso,
Tex.

HERBERT L. ABRAMS, M.D.
Assistant Professor of Radiology, Stanford Uni-
versity School of Medicine, San Francisco, Calif.

MARY JANE AGUILAR, M.D.
Resident in Pathology, San Francisco Hospital,
University of California Pathology Laboratory, San
Francisco, Calif.

ROBERT E. BALL, M.D.
Research Fellow in Cardiology, University of Cali-
fornia School of Medicine, San Francisco, Calif.

S. RICHARD BAUERSFELD, M.D.
Formerly, Children’s Bureau Fellow in Harriet Lane
Home Cardiac Clinic, Johns Hopkins Hospital,
Baltimore, Md.; currently, Associate Professor of
Pediatrics and Chief of Pediatric Cardiology, Uni-
versity of Pittsburgh School of Medicine, Pittsburgh,
Pa.

JOHN F. BROWN, M.D.
Instructor in Medicine, University of Wisconsin
Medical School, Madison, Wis.

JACKSON T. CRANE, M.D.
Assistant Professor of Pathology, Pediatrics, and
Surgery, University of California Hospital and
School of Medicine, San Francisco, Calif.

ARCHER P. CROSLEY, JR., M.D.
Associate Professor of Medicine, University of
Wisconsin Medical School, Madison, Wis.

CHARLES W. CRUMPTON, M.D.
Assistant Professor of Medicine, University of
Wisconsin Medical School, Madison, Wis.

CHARLES T. DOTTER, M.D.
Professor and Head, Department of Radiology,
University of Oregon Medical School, Hospitals, and
Clinics, Portland, Ore.

WILLIAM J. DUNN, M.D.
Fellow in Medicine, Mayo Foundation, Graduate
School, University of Minnesota, Rochester, Minn.

JESSE E. EDWARDS, M.D.
Consultant, Section of Pathologic Anatomy, Mayo
Clinic; Professor of Pathologic Anatomy, Mayo
Foundation, Rochester, Minn.

WILDA GIGEE
Research Assistant in Experimental Medicine, Uni-
versity of Vermont College of Medicine, Burlington,
Vt.

HENRY HAIMOVICI, M.D.
Associate Surgeon, Montefiore Hospital, New York,
N. Y.

B. L. HISEY
Research Consultant in Electricity to the Schellenger
Foundation, Texas Western College of the Uni-
versity of Texas, ElPaso, Tex.

ELLIOTT S. HURWITT, M.D.
Chief of the Surgical Division, Montefiore Hospital;
Clinical Professor of Surgery, Columbia University,
New York, N. Y.

JOHN H. HUSTON, M.D.
Fellow of Wisconsin Heart Association 1953–1955,
University of Wisconsin Medical School, Madison,
Wis.

W. E. INGERSON, M. ENG.
Member of the Technical Staff, Bell Telephone
Laboratories; Research Consultant in Electricity to
the Schellenger Foundation, Texas Western College
of the University of Texas, El Paso, Tex.

WALTER F. KVALE M.D., M.S., F.A.C.P.
Consultant, Section of Medicine, Mayo Clinic;
Associate Professor of Medicine, Mayo Foundation,
Graduate School, University of Minnesota,
Rochester, Minn.
EUGENE LEPESCHKIN, M.D.
Associate Professor of Experimental Medicine, University of Vermont College of Medicine; Chief Cardiographer at the DeGoesbriand Memorial Hospital, Burlington, Vt.

DAN G. McNAMARA, M.D.
Formerly, National Heart Institute Fellow in Harriet Lane Home Cardiac Clinic, Johns Hopkins Hospital, Baltimore, Md.; currently, Chief of Pediatric Cardiology, Baylor University School of Medicine, Houston, Tex.

WILLIAM M. MANGER, M.D.
Fellow in Medicine, Mayo Foundation, Graduate School, University of Minnesota, Rochester, Minn.

JAMES T. PRIESTLEY, M.D., M.S., Ph.D. F.A.C.S.
Consultant, Section of Surgery, Mayo Clinic; Professor of Surgery, Mayo Foundation, Graduate School, University of Minnesota, Rochester, Minn.

RAYMOND D. PRUITT, M.D.
Associate Director and Professor of Medicine, Mayo Foundation, Graduate School, University of Minnesota, Rochester, Minn.

WILHELM RAAB, M.D.
Professor of Experimental Medicine, University of Vermont College of Medicine; Head of the Cardiovascular Research Unit at the DeGoesbriand Memorial Hospital, Burlington, Vt.

GRACE M. ROTH, Ph.D.
Consultant, Section of Physiology, Mayo Clinic; Professor of Physiology, Mayo Foundation, Graduate School, University of Minnesota, Rochester, Minn.

GEORGE G. ROWE, M.D.
Markle Fellow and Research Associate in Medicine, University of Wisconsin Medical School, Madison, Wis.

BERNARD SEIDENBERG, M.D.
Adjunct Surgeon, Montefiore Hospital, New York, N. Y.

MAURICE SOKOLOW, M.D.
Associate Professor of Medicine, Chief of the Cardiovascular Division of the Department of Medicine, University of California School of Medicine, San Francisco, Calif.

YVONNE K. STARCHESKA
Research Assistant in Experimental Medicine, University of Vermont College of Medicine Burlington, Vt.

H. BRODIE STEPHENS, M.D.
Associate Clinical Professor of Surgery, University of California Hospital and School of Medicine, San Francisco, Calif.

HELEN B. TAUSSIG, M.D.
Associate Professor of Pediatrics, Johns Hopkins University School of Medicine, Physician-in-Charge, Harriet Lane Home Cardiac Clinic, Johns Hopkins Hospital, Baltimore, Md.

HERMAN TUCHMAN, M.D.
Trainee of The National Heart Institute 1955–1956, University of Wisconsin Medical School, Madison, Wis.

B. DANIEL WHITE, M.D.
Formerly, Children's Bureau Fellow in Harriet Lane Home Cardiac Clinic, Johns Hopkins Hospital, Baltimore, Md.; currently, Cardiac Clinic, Greenville General Hospital, Greenville, S. C.
CIRCULATION
OFFICIAL JOURNAL OF THE AMERICAN HEART ASSOCIATION
HERRMAN L. BLUMGART, M.D., Editor-in-Chief
330 Brookline Avenue, Boston 15, Mass.
EDITH E. PARRIS, Assistant Editor

ASSOCIATE EDITORS

EDGAR V. ALLEN, M.D.  SAMUEL BELLET, M.D.  PAUL M. ZOLL, M.D.

Correspondence concerning editorial matters should be addressed to the Editor-in-Chief, at the above address. All communications concerning business matters should be addressed to Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y.

Subscription rates, $13.00 per year within the United States and Canada; $14.00 per year elsewhere. Single copies, $2.00; foreign, $2.50; October 1955, $3.50. A combination subscription with Circulation Research is available at $19.00 per year within the United States and Canada, $22.50 per year elsewhere. Subscriptions are accepted on a calendar year basis.


Published monthly at Mount Royal & Guilford Avenues, Baltimore, Md. Entered as second-class matter at the Post Office, Baltimore, Md., Jan. 9, 1930, under the Act of March 3, 1879.

Original Communications. Manuscripts for publication, letters and all other editorial communications should be addressed to the Editor-in-Chief, at the above address. Articles are accepted for publication on the condition that they are contributed solely to this journal.

Manuscripts. Duplicate manuscripts, tables and illustrations should be submitted to facilitate selection and processing of papers. Manuscripts should be typewritten on good quality paper, one side of the page only, with double or triple spacing and liberal margins. They should include the authors' degrees and hospital and academic affiliations (for use on the "Contributors" page), and an address for mailing proofs. References to the literature should be compiled at the end of the article in numerical sequence, the style of this journal being observed regarding the full amount of material to be included in each bibliographic entry, the order of material, capitalization and punctuation. If a "Personal Communication" is listed in the bibliography, a letter must be submitted in which the direct quotation is given with the signature of the original author.

A foreword not to exceed 100 words should also be submitted with the manuscript. This foreword should serve primarily as an orientation for the reader by stating the general problem, the purpose of the study, and the approach or lines of investigation utilized. The results and conclusions should generally be reserved for the Summary.

Illustrations and Tables. Position of figures and tables in the text should be marked on manuscript. Circulation uses arabic rather than roman numbering. Figures should carry their number and the author’s name on the back; figure legends should be compiled in a separate list. To ensure clear reproduction, all copy for zinc cuts, including pen drawings and charts, should be prepared with black india ink, and a black ribbon should be used for typewritten material; for halftone work, good photographic prints or the original drawings should be supplied. Special arrangements must be made with the editor for printing of color plates, elaborate tables or an excessive number of illustrations.

Reprints. Reprints of articles will be furnished to contributors when ordered in advance of publication. An order form, showing cost of reprints, is sent with proofs. Individual reprints of an article can usually be obtained by writing directly to the author at the address given on the "Contributors" page of that issue.

Exchanges. Contributions, letters, exchanges, reprints and all other communications relating to the Abstracts Department of Circulation should be sent to the Editor-in-Chief at the above address. Writers on subjects which are related in any way to cardiovascular disease are requested to place this address on their permanent mailing list.

Book Reviews. Books and monographs treating specifically of the same subject matter as this Journal will be reviewed as space is available. Send books for review to the Editor-in-Chief, at the above address.

Business Communications. Send all communications regarding advertising, subscriptions, change of address, etc., to the Publisher, at the address listed below. Remittance for subscriptions should be made by check, draft, post office or express money order to the Publisher. Members of the American Heart Association should make subscription arrangements with the Association. The Publisher should be advised of change of address about thirty days before date of issue, with both the subscriber’s old and new address given. Advertising space is given only to articles of known scientific value. Forms close first day of month preceding date of issue. Advertising rates and page sizes on application.
CIRCULATION
OFFICIAL JOURNAL OF THE AMERICAN HEART ASSOCIATION

EDITOR-IN-CHIEF
Herrman L. Blumgart, Boston, Mass.
Edith E. Parris, Assistant Editor

EDITORIAL BOARD
E. Cowles Andrus, Baltimore, Md.
Benjamin M. Baker, Baltimore, Md.
Janet S. Baldwin, New York, N. Y.
George E. Burch, New Orleans, La.
Howard B. Burchell, Rochester, Minn.
J. Scott Butterworth, New York, N. Y.
A. C. Corcoran, Cleveland, Ohio
André Cournand, New York, N. Y.
Thaddeus S. Danowski, Pittsburgh, Pa.
Charles T. Dotter, Portland, Ore.
A. Stone Freedberg, Boston, Mass.
Harry Goldblatt, Cleveland, Ohio
Harold D. Green, Winston-Salem, N. C.
Dwight E. Harken, Boston, Mass.
Hans H. Hecht, Salt Lake City, Utah
Edgar A. Hines, Jr., Rochester, Minn.
H. M. Marvin, New Haven, Conn.
David F. Opdyke, Rahway, N. J.
George A. Perera, New York, N. Y.
David D. Rutstein, Boston, Mass.
Howard B. Sprague, Boston, Mass.
Isaac Starr, Philadelphia, Penna.
Helen B. Taussig, Baltimore, Md.
George E. Wakerlin, Chicago, Ill.
James V. Warren, Durham, N. C.
James Watt, Bethesda, Md.
Irving S. Wright, New York, N. Y.

ASSOCIATE EDITORS
Edgar V. Allen
Rochester, Minn.
Samuel Bellet
Paul M. Zoll
Boston, Mass.

PUBLICATIONS COMMITTEE OF THE SCIENTIFIC COUNCIL
AMERICAN HEART ASSOCIATION
Irving S. Wright, Chairman
New York, N. Y.
H. M. Marvin, Vice Chairman
New Haven, Conn.

Paul S. Barker
Ann Arbor, Mich.
Stanley E. Bradley
New York, N. Y.
J. Scott Butterworth
New York, N. Y.

Irving B. Hexter
Cleveland, Ohio
Thomas M. McMillan

Charles D. Marple, Medical Director, American Heart Association, New York, N. Y.

Herrman L. Blumgart
Boston, Mass.
Howard P. Lewis
Portland, Ore.
Carl J. Wiggers
Cleveland, Ohio

Interlingua Summaries by Science Service, Division de Interlingua, New York, N.Y., Alexander Gode, Chief.