

**PROGRAM AND PROCEEDINGS OF THE  
FIFTEENTH ANNUAL MEETING  
THE SOCIETY OF NUCLEAR MEDICINE**

**THE CHASE-PARK PLAZA HOTEL—ST. LOUIS, MISSOURI**

**JUNE 27-30, 1968**

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# 15th ANNUAL MEETING

THURSDAY, JUNE 27	FRIDAY, JUNE 28		
	KHORASSAN ROOM	CHASE CLUB	STARLIGHT ROOF
<b>7:30-8:50 am</b>	<b>TEACHING SESSIONS</b>		
<b>9-12:30 pm</b> BOARD OF TRUSTEES MEETING TIARA LOUNGE	<b>9-10:30 am</b> I BRAIN SCANNING (CLINICAL)	III HEMATOLOGY	
	<b>10:30-11 am INTERMISSION</b>		
	<b>11-12:30 pm</b> II CEREBRAL BLOOD FLOW AND BRAIN SCANNING	IV SCANNING I NEW INSTRUMENTS	V METABOLIC STUDIES I
<b>12:30-2 pm</b>	<b>LUNCH</b>		
<b>1:30-5 pm</b> TECHNOLOGISTS' PROGRAM KHORASSAN ROOM <b>2-5:30 pm</b> BOARD OF TRUSTEES MEETING TIARA LOUNGE <b>4-5:30 pm</b> RENAL DISORDERS PANEL STARLIGHT ROOF <b>4-5:20 pm</b> TEACHING SESSION ON BONE AND JOINT CHASE ROOM <b>1:30-3:30 pm</b> CYCLOTRON-PRODUCED ISOTOPES STARLIGHT ROOF	<b>2-3:30 pm</b> VI KIDNEY SCANNING (RECENT ADVANCES)	VIII SCANNING II SPECIAL TECHNIQUES COLOR DISPLAY	X METABOLIC STUDIES II
	<b>3:30-4 pm INTERMISSION</b>		
	<b>4-5:30 pm</b> VII KIDNEY FUNCTION STUDIES	IX SCANNING III DATA PROCESSING COMPUTERS	XI METABOLIC STUDIES III
<b>EVENING</b>			
<b>7-9</b>	WELCOMING COCKTAIL PARTY		<b>8-9:30</b> CLINICAL SCAN CONFERENCE CHASE CLUB

## PROGRAM—JUNE 27-30, 1968

SATURDAY, JUNE 29			SUNDAY, JUNE 30		
KHORASSAN ROOM	CHASE CLUB	STARLIGHT ROOF	KHORASSAN ROOM	CHASE CLUB	STARLIGHT ROOF
<b>7:30–8:50 am</b>			<b>TEACHING SESSIONS</b>		
<b>9–10:30 am</b> XII THYROID SCANNING	XIV SCANNING IV NEW SYSTEMS COLLIMATORS PHANTOMS	XVI ORGAN HEMODYNAMICS	<b>9–10:30 am</b> XX REGIONAL LUNG FUNCTION	XXII RADIOPHARMA- CEUTICALS (TUMOR- LOCALIZING AGENTS)	
<b>10:30–11 am</b>			<b>INTERMISSION</b>		
<b>11–12:30 pm</b> XIII LIVER SCANNING (CLINICAL)	XV RADIOPHARMA- CEUTICALS (NEW NUCLIDES)	XVII THYROID FUNCTION STUDIES	<b>11–12:30 pm</b> XXI LUNG SCANNING (CLINICAL)	XXIII RADIOPHARMA- CEUTICALS ( <sup>113m</sup> In COLLOIDS)	
<b>12:30–2 pm</b>			<b>LUNCH</b>		
<b>2–3:30 pm</b> XVIII ORGAN BLOOD FLOW (RADIOISOTOPIC ASSESSMENT)	XIX RADIOPHARMA- CEUTICALS ( <sup>99m</sup> Tc COLLOIDS)		<b>2–3:30 pm</b> XXIV PANCREAS, PARATHYROID, PROSTATE AND PLACENTA SCANNING	XXVI EXPERIMENTAL NUCLEAR MEDICINE—GI TRACT, LIVER AND LUNG	
<b>3:30–4 pm</b>			<b>INTERMISSION</b>		
<b>4–5</b> NUCLEAR PIONEER LECTURE <b>5–5:30</b> BUSINESS MEETING			<b>4–5:30 pm</b> XXV SKELETAL AND JOINT SCANNING	XXVII BRAIN SCANNING (EXPERIMENTAL AND CLINICAL)	
<b>EVENING</b>					
<b>6:30–7:30</b>	COCKTAIL PARTY STARLIGHT ROOF		ADJOURN		
<b>7:30</b>	BANQUET KHORASSAN ROOM				

**SCIENTIFIC PROGRAM**

**SESSION I**

**Brain Scanning—Technical and Clinical Aspects**

**Chairman: James L. Quinn III**

**Comparison of Quantitative and Photoscanning for Diagnosis of Space-Occupying Lesions in the Brain**

S. Hasan, D. A. Weber, P. J. Kenny and J. S. Laughlin

**Diagnosis of Intracranial Cysts by means of Brain Scan**

Fred S. Mishkin and John Truksa.

**Evaluation of Serial <sup>99m</sup>Tc Brain Scans in Cerebrovascular Accidents**

Michael S. Usher and James L. Quinn III

**Use of Brain Scan in Determining Optimum Time for Carotid Artery Surgery**

Thomas A. Verdon, Jr., Arthur Cohen and Frank H. Allen

9-10:30 am

**Technetium Kinetics in Humans—Effect of Heavy Ion Pretreatment on Optimal Time for Brain Scanning**

M. Welch, M. Adatepe and E. J. Potchen

**Comparison Between Sensitivity and Resolution Based on a Clinical Evaluation with ACRH Brain Scanner**

A. Gottschalk, J. D. Abatie, J. P. Petasnick, R. E. Polcyn, R. N. Beck and D. B. Charleston

**Demonstration of Posterior Fossa Tumors in Children**

L. D. Samuels

**Role of Brain Scanning in the Differential Diagnosis of Unilateral Nerve Deafness**

Frank H. DeLand and Henry N. Wagner, Jr.

10:30-11:00 am

**INTERMISSION**

**SESSION II**

**Cerebral Blood Flow and Brain Scanning**

**Chairman: E. James Potchen**

**A Combined Circulation Scan Technique For Differential Diagnosis of Cerebral Infarct and Tumor**

Y. L. Yamamoto and W. Feindel

**Radioisotope Scintiangiography of Cerebral Hemisphere Lesions**

John C. Kennady, Ross Potter, Frederick Chin and Leonard A. Swanson

**225 Brain Scans with Concomitant Cerebral Blood Flow**

Robert L. Bell

11:00-12:30 pm

**Some Effects of Scalp and Skull on External Measurements of Brain Isotope**

William H. Oldendorf and Youichi Iisaka

**Scintillation Imaging of Arterial Blood Flow in Certain Critical Organs**

P. M. Johnson, S. K. Hilal, P. J. Cannon, D. S. Svahn, J. Haft and E. H. Wood

**A Nondestructive Method of Studying Cerebral Hemispheric Blood Flow**

George L. Jackson and Nancy M. Blosser

**Radioisotope Assessment of Cerebral Vascular Disease—A Critical Analysis**

Niels Lassen

12:30-2 pm

**LUNCH**

**SESSION III****Hematology****Chairman: John H. Lawrence****Evaluation of <sup>75</sup>Se-Selenomethionine as a Tool for Hematologic Investigation****Patricia A. McIntyre, Bruce Evatt, Ursula Scheffel and Barbara Hodkinson****Radioiodination of Leukocytes by an Electrolytic Method****H. F. Cheng and R. E. Peterson****Continuous <sup>57</sup>Co B<sub>12</sub> Administration Study to Evaluate B<sub>12</sub> Absorption in Humans Receiving Colchicine or Cascara Sograda****Robert B. Chodos, D. I. Webb and W. W. Faloon****Effects of Mercurials on Erythrocytes****Bernard Shapiro, George Kollmann and David Martin****Assessment of Erythropoiesis by Ferrokinetics and Radio-colloid Bone-Marrow Scanning****Francis A. Goswitz, C. Lowell Edwards and Helen Vodopick****Whole-Body Scanning of <sup>59</sup>Fe in Evaluation of Body Distribution of Erythropoietic Marrow and as an Adjunct to Iron Kinetic Studies****Peter Ronai, H. S. Winchell and John H. Lawrence****Improved Technique to Denature Red Cells for Spleen Scanning****S. M. Sharma, M. C. Patel, P. Ramanathan, R. D. Ganatra and M. Blau****INTERMISSION****SESSION IV****Scanning I—New Instruments****Chairman: Michel M. Ter-Pogossian****Stereoscintophotography****N. David Charkes****New Scintillation Camera****F. Deaver Thomas, William H. Beierwaltes, Lawrence Jones, Harry Colestock and Theodore Colvin****Improved-Resolution Fast-Section Scanner****Benedict Cassen, H. Gass and Paul Crandall****Three-Dimensional Display of Scanning Images****Paul V. Harper, D. B. Charleston, R. N. Beck, N. Yasillo and B. Fromes****Rapid Brain Scanner with Self-Contained Computer and CRT Display for Both Rectilinear and Transverse-Section Viewing****David E. Kuhl and Roy Q. Edwards****Radioisotope Imaging in Three Dimensions****Gerd Muehlechner****Tomographic Capacity of a 10-Probe Rectilinear Scanner****Leonard A. Swanson, Hideo Yamada, DeLores Johnson and George V. Taplin****SESSION V****Metabolic Studies I****Chairman: Ervin Kaplan****Usefulness of Whole-Body Counting for Detecting Carriers of Wilson's Disease****Ken Hamamoto, Ladislav P. Novak, Norman P. Goldstein and W. Newlon Tauxe****Gastrointestinal Absorption of Copper Studies With <sup>64</sup>Cu, <sup>95</sup>Zr, Whole-Body Counter and Scintillation Camera****P. M. Weber, S. O'Reilly and M. Pollycove****Radioisotopic Assay of Serum Arginase Activity—A Sensitive and Specific Test for Liver Disease****Shigekoto Kaihara, Nicola Carulli and Henry N. Wagner, Jr.****Radiometric Procedures for In Vitro Determination of Cholesterol Biosynthesis****C. D. Eskelson, H. P. Jacobi, A. L. Dunn and C. R. Cazez****Determination of Copper and Manganese in Human Liver by Neutron Activation Analysis and Introduction of Repeated-Pulsed Neutron Activation Analysis in Nuclear Medicine****Hideo Ueda, Tohru Iwase, Haruo Kameda, Masahiro Iio, Akira Tani, Hiroyuki Nagano, Yasuhiko Matsuda and Nawoyuki Kawai****External Monitoring of <sup>51</sup>Cr-Labeled Glucose****Albert E. Johnson and Frank Gollan****Peripheral Glucose Assimilation and Insulin Secretory Capacity in Normals****Coskun F. Bekdik****LUNCH**

**SCIENTIFIC  
PROGRAM****SESSION VI****Kidney Scanning—Recent Advances****Chairman: John McAfee**

**Modified  $^{99m}\text{Tc}$ -Iron Complex for Kidney Visualization**  
Howard S. Stern, Leopoldo J. Anghileri and Richard C. Reba

**Complex of  $^{99m}\text{Tc}$  and L-Cysteine for Renal Scanning**  
A. G. Walker and J. McRae

**Chelates of Diethyltriaminopentaacetic Acid (DTPA) for Visualization of Renal Structure and Function**  
Richard C. Reba, Fazle Hosain and H. N. Wagner, Jr.

2-3:30 pm

**Evaluation of Short-lived Radiopharmaceutical Agents for Sequential and Conventional Kidney Scanning**  
Michael Hayes and Norman S. MacDonald

**Quantitative Renal Imaging using  $^{113m}\text{In}$  Chelates and a 1,600 Channel Memory**  
David A. Goodwin, Stephen D. Miller and Gerald L. DeNardo

**Kidney Scanning with Hippuran in the Anuric Transplanted Kidney**  
E. Lubin, Z. Lewitus, J. Rosenfeld and M. Levi

**Scanning of Transplanted Kidneys**  
William S. Maxfield, Julio E. Figueroa and Robert Birchall

3:30-4 pm

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**INTERMISSION**

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**SESSION VII****Kidney Function Studies****Chairman: M. Donald Blafox**

**Physiological Verification of a Model for Interpretation of the Renogram**  
Melvin H. Farmelant, Sebastian Genna, Charles Sachs and Belton A. Burrows

**Radiohippuran Excretion Test in Asymmetric Renal Parenchymal Disease**  
Ian B. Tyson and Lizabeth Smitten

4-5:30 pm

**Measurement of Extraction Efficiency of Radiohippuran by Renal Artery Injection and Renal Vein Sampling**  
William J. MacIntyre, Walter H. Pritchard and Richard W. Eckstein

**Clinical Assessment of Renal Blood Flow With  $^{133}\text{Xe}$**   
M. Donald Blafox, Alan Gruskin, Monique Katz, Chien-Hsing Meng and Milton Elkin

**Radionuclide Studies in Evaluation of Renal Response to E S T in Normal and Renal Transplanted Animals**  
Robert H. Wilkinson, Jr., M. J. Short and Jack K. Goodrich

**Renal Excretory Mechanism of Radioactive Metal Chelates**  
Heinz-Georg Vilhuber

**Radioisotopic Estimation of Residual Urine without Urethral Catheterization**  
Bernard S. Strauss and M. Donald Blafox

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**CHASE CLUB****STARLIGHT ROOF****SESSION VIII****Scanning II. Special Techniques and Color Display****Chairman: Paul V. Harper****Image Recording and Integration System for Dynamic Radioisotope Studies Based on Advanced Television Circuitry**  
William L. Ashburn, John C. Harbert, Willard C. Whitehouse and Raymond E. Murphy**Preliminary Clinical Studies Using an Image Integration System**John C. Harbert, William L. Ashburn, Dean T. Mason and Jack D. Davidson**Overlap Photoscan Technique**James T. Dodge, Patrick A. Lynch and Michael D. Edwards**Use of a Tape Recorder in Simultaneous Multi-Isotope Scanning**Moshe Ben-Porath, Glenn Clayton and Ervin Kaplan**Live Color Recording From a 10-Probe Rapid Scanner**Ralph Adams and Henry L. Jaffe**Depth Discrimination in Scanning by Dual-Channel Color Modulation of Two Probes**Ervin Kaplan and Moshe Ben-Porath**Organ Imaging with Ektacolor Paper**Maurice Nataro, O. R. Czerwonka and B. R. Larke**SESSION X****Metabolic Studies II****Chairman: Donald R. Korst****<sup>75</sup>Se-Diselenodibutyric Acid: Parent Compound For a Series of Gamma-Labeled Lipids**Richard P. Spencer and Kennedy R. Brody**Biological Half-Life of <sup>75</sup>Se-Selenomethionine In Man**Moshe Ben-Porath, Lawrence Case and Ervin Kaplan**Turnover of <sup>3</sup>H-L-Methionine and <sup>75</sup>Se-Selenomethionine in Isolated Perfused Liver**Joseph Sternberg and Gerard Lambert**Kinetics of Seleniated Compounds during Vitamin E Deficiency**Andree Imbach, Lysette Trahan and Joseph Sternberg**Dynamic Studies with <sup>75</sup>Se-Cystine in Normal and Irradiated Rats**Joseph Sternberg and Armand Mercier**Radiation Sensitivity of Mammalian Thyroid Cell Function**H. J. Dworkin and M. Carroll**Exchangeable Sodium in Man: Comparison of Standard Urinary Method and Metabolic Balance with Whole-Body Counting**Ronald G. Evens, Leslie Baer, John R. Gill, Jr. and Frederic C. Bartter**Effect of Route and Load of Administered Phenylalanine on Human In Vivo Phenylalanine Catabolism**M. B. Fish, M. Pollycove, J. DeGrazia, P. Cohen and K. Fleury**INTERMISSION****SESSION IX****Scanning III. Data Processing—Computers****Chairman: W. N. Tauxe****Scanning Optimization in Terms of Statistical Criteria**T. D. Cohen, P. V. Harper and R. N. Beck**Detection and Location of Abnormalities in Radioisotope Scan Data**Lee M. Spetner**Processing and Display of Radioisotope Data**S. Wilensky, A. B. Ashare, S. M. Pizer, C. A. Burnham, S. Aronow and G. L. Brownell**Interval Determination in Radioisotope Scanning**R. Nash and A. B. Brill**Medical Radioisotope Scanning II. Collimator Point Response Function Effects in Optimum Data Processing**R. A. Farrell and R. W. Hart**System for On-Line Computer Processing of the Radio-nuclide Scan**Donald W. Brown and D. S. Groome**Improved Recording of Dynamic Scintillation Camera Studies**C. H. Douglas and E. Suprenant**SESSION XI****Metabolic Studies III****Chairman: Joseph F. Ross****Studies on the Retention of <sup>137</sup>Cs following Accidental Internal Deposition**John M. Vogel and John A. Eckert**<sup>67</sup>Ga Metabolism in Rabbits**P. Kostamis, C. Constantinides, D. Binopoulos and B. Malamos**<sup>47</sup>Ca Absorption in Bile Duct Ligated Rats**C. Constantinides, P. Kostamis, K. Kehayoglou, J. Sfontouris and B. Malamos**<sup>113m</sup>I as a Possible Bone Scanning Agent**R. L. Hayes, B. L. Byrd and J. E. Carlton**Total-Body Nitrogen, Protein and Phosphorus by Fast-Neutron In Vivo Activation Analysis**Teruo Nagai, Isao Fujii and Haruo Muto**Zinc-Binding Capacity and Zinc Levels of Serum**William H. Strain, Charles G. Rob, Walter J. Pories, John A. Hennesen and John Montoya**Estimation of In Vivo Digestibility and Absorption of Food by Labeling: a New Approach in Clinical Nutrition**Kunio Okuda, Yutaka Shimokawa and Isao Takara

**SCIENTIFIC  
PROGRAM****SESSION XII****Thyroid Scanning****Chairman: N. David Charkes**

**Fluorescent Thyroid Scanning without the Use of Radioactive Nuclides In Vivo**  
P. B. Hoffer, D. B. Charleston, R. N. Beck and A. Gottschalk

**Prospective Study of the Clinical Evaluation of Solitary Thyroid Nodules**  
Robert L. Young and Edwin M. Bradley

**9-10:30 am**

**Pyramidal Lobe in Thyroid Imaging**  
J. L. Izenstark, A. Forsaith and N. Horwitz

**Laminar Scintiscans for Determining Depth of Small Metastases of Thyroid Carcinoma**  
C. Lowell Edwards, R. Tanida and R. Mora

**Thyroid Function Studies in Turner's Syndrome and Allied Conditions**  
S. McHardy-Young, P. E. Polani and D. Doniach

**Response of Toxic Nodular Goiter to High- and Low-Dose Radioiodine Therapy**  
N. David Charkes and Robert E. Cantor

**10:30-11 am**

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**INTERMISSION**

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**SESSION XIII****Liver Scanning—Clinical Aspects****Chairman: Millard N. Croll**

**Liver Scan Artifacts**  
R. E. Polcyn, James L. Quinn, III and A. Gottschalk

**<sup>198</sup>Au of <sup>99m</sup>Tc-S Colloid and the "False-Positive" Liver Scan**  
Marvin B. Cohen

**Approaches to the Problem of Noise in <sup>99m</sup>Tc Liver Scans**  
M. Reddy, P. V. Harper, A. Gottschalk and R. Polcyn

**Liver Scan Evaluation of Amoebic Abscess**  
Gerald S. Johnston, T. W. Sheehy, L. F. Parmley, Jr. and H. W. Boyce

**11-12:30 pm**

**Combined Diagnostic Approach of Hepatic Scanning and Celiac Angiography in the Diagnosis of Liver Disease**  
Leonard M. Freeman, Arnold Derman, Monique Katz and Chien-Hsing Meng

**Sequential Liver and Upper Abdominal Scanning in Hepatobiliary Disease**  
Hideo Yamada, Leonard A. Swanson, DeLores E. Johnson and George V. Taplin

**<sup>99m</sup>Tc Sulfide Scanning in Clinical and Experimental Orthotopic Liver Homotransplantation**  
Donald W. Brown, C. G. Groth, L. Brettschneider, D. Cores, J. D. Cleaveland, R. Trow and T. E. Starzl

**12:30-2 pm**

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**LUNCH**

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**SESSION XIV****Scanning IV. New Systems—Collimators & Phantoms****Chairman: Hal O. Anger****Applications Of Spark Chambers in Nuclear Medicine**  
Malcolm R. Powell, David C. Price, Leon Kaufman, Dick A. Mack and Victor Perez-Mendez**Data Storage, Processing and Display System for Radio-nuclide Imaging**  
T. K. Natarajan, Dilip Mehta and Henry N. Wagner, Jr.**Some Clinical Applications of the Hybrid II Gammascanner**  
Bowen Keller, Paul A. Farrer, Philip Rubin, T. P. Davis and R. J. Martone**Comparison of Brain Scanning Techniques: <sup>99m</sup>Tc Using an Anger Camera and <sup>74</sup>As Using a Positron Scanner**  
A. B. Ashare, B. Bub, M. S. Potsaid, R. G. Ojemann, S. Aronow and W. H. Sweet**Clinically Useful 3-Dimensional Phantom**  
Michael Hayes**Design and Performance Of a "Constant-Resolution" Focusing Collimator**  
Sebastian Genna and Belton A. Burrows**Heterogeneous Sample Counting**  
Arthur F. Dratz and James C. Coberly**SESSION XVI****Organ Hemodynamics and Blood Pool Scanning****Chairman: Leslie R Bennett****Computer Calculation of Cardiac Output from Radioisotope Dye Dilution Curves**  
William J. MacIntyre, Donald Butler, Gretchen S. Curtis and Muhammad A. Razzak**Simulation Studies of Radiocardiogram by Analog Computer**  
Yasushi Ishii, Kanji Torizuka, Masaichi Fukase and Michiyoshi Kuwabara**Studies of Splenic Blood Flow and Function and Spleen Scintiphotography Using Heated <sup>99m</sup>Tc-Labeled Erythrocytes**  
Paul A. Farrer, Alan E. Oestreich and Samuel S. Ciccio**Splanchnic Blood-Pool Scanning in Occlusive Disease of the Superior Mesenteric Artery: an Experimental Study**  
Frederick J. Bonte, Robert W. Parkey and George C. Curry**Endothelial Lesions—Demonstration By Scintiscanning**  
Milo M. Webber and Roscoe C. Webb, Jr.**Diagnosis of Pericardial Effusion by Radioisotopic Angiocardiography**  
Joseph P. Kriss**Radiopulmonary Cardiography with the Scintillation Camera and <sup>99m</sup>Tc-Perchnetate**  
Gerald Burke, Arlene Halko and David Goldberg**INTERMISSION****SESSION XV****Radiopharmaceuticals—New Nuclides and Their Medical Uses****Chairman: William G. Myers****Cyclotron Generator of High-Purity <sup>123</sup>I**  
Vincent J. Sodd and James Blue**Study of Preliminary Experience with the Use of <sup>123</sup>I for Thyroid Function and Scanning Compared to <sup>131</sup>I**  
H. N. Wellman, J. F. Mack, B. I. Friedman and E. L. Saenger**<sup>48</sup>K and <sup>67</sup>Cu for Medical Applications**  
H. A. O'Brien and H. B. Hupf**<sup>177</sup>Lu and <sup>176m</sup>Lu as Potential Agents for Skeletal Imaging**  
Robert E. O'Mara, John G. McAfee and Gopal Subramanian**<sup>169</sup>Y-Diethylenetriaminepentaacetic Acid (<sup>169</sup>Yb-DTPA): a New Radiopharmaceutical for Brain**  
Fazle Hosain, Richard C. Reba and Henry N. Wagner, Jr.**Study of <sup>86</sup>Rb in a Malignancy Metastatic to Liver**  
Robert L. Bell**SESSION XVII****Thyroid Function Studies****Chairman: William H. Bland****Measurement of the Absolute Uptake of Radioiodine by the Thyroid**  
A. G. Schultz and F. D. Rollo**Circadian Variation of the T-3 Resin Uptake Test and Free Thyroxine Concentration**  
E. William Allen and Walter DiGiulio**Autonomous Function in Sporadic Multinodular Goiter**  
J. Martin Miller, Bernice Kawas and Melvin A. Block**Improved, Rapid Method for Free Thyroxine in Serum**  
R. R. Cavalieri, J. N. Castle and G. L. Searle**Determination of Thyroxine in Serum by Saturation Analysis of Thyroxine Binding Proteins**  
Alfredo Cuaron and Felipe Gordon**Automation of the Thyroid Binding Test**  
J. L. Izenstark, N. Horwitz, K. Cook and A. Forsaith**Perchlorate Washout of Perchnetate from the Thyroid Gland**  
L. Heck, K. Lathrop, A. Gottschalk, P. V. Harper and M. Fultz**Evaluation of a Commercially Available In Vitro Test to Assay Serum Thyroxine**  
William M. Smoak III, Edward M. Smith, George W. James, Robert K. Katims and Albert J. Gilson**LUNCH**

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# SATURDAY AFTERNOON

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## KHORASSAN ROOM

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### SCIENTIFIC PROGRAM

#### SESSION XVIII

#### Organ Blood Flow—Radioisotopic Assessment

Chairman: E. James Potchen

<sup>133</sup>Xe Clearance Studies in Peripheral Vascular Disease  
Niels Lassen

Use of Radionuclides in the Determination of Vascularity of Pedicle Skin Grafts  
W. Newlon Tauxe, Paul R. Lipscomb and John N. Simons

Tumor Blood Flow by the <sup>86</sup>Rb Method: Effect of Surface Area  
Richard P. Spencer

2-3:30 pm

Consecutive Determination of the Cardiac Output and Renal Blood Flow by External Monitoring of Radioactive Isotopes  
Muhammad A. Razzak, Robert E. Botti, William J. MacIntyre and Walter H. Pritchard

Visualization of Blood Vessels and Organs with Ultrashort-Lived Radioisotopes and the Scintillation Camera  
Yukio Yano and Hal O. Anger

Areas of Reduced Coronary Blood Flow with Developing Collateral Circulation Detected by Serial Scans  
Robert O. Smith, W. D. Love, Y. Ishihara, M. S. Elliott and P. H. Lehan

Discussion and Critical Analysis  
Niels Lassen

3:30-4 pm

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#### INTERMISSION

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4-5 pm

#### NUCLEAR PIONEER LECTURE

5-5:30 pm

#### BUSINESS MEETING

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### SUNDAY MORNING JUNE 30, 1968

#### SESSION XX

#### Regional Lung Function Assessment

Chairman: Henry N. Wagner, Jr.

Radioactive Gases in Studying Lung Function  
John West

Measurements of Regional Ventilation and Blood Flow in the Lung Using <sup>133</sup>Xe and a Scintillation Camera  
N. Aspin, H. Levison, T. R. Weng, E. A. Featherby and A. C. Bryan

9-10:30 am

Distribution of Ventilation  
Gerald L. DeNardo, Stuart McHardy-Young and David A. Goodwin

Significance of Early and Delayed Inhalation Lung Scan Examinations  
Norman D. Poe, Earl K. Dore, Alfred Greenberg, R. L. Yanda and George V. Taplin

10:30-11 am

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#### INTERMISSION

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**CHASE CLUB**

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**SESSION XIX**

**Radiopharmaceuticals—<sup>99m</sup>Tc Colloids**

**Chairman: Wil B. Nelp**

**Pertechnetate Production from <sup>99</sup>Mo by Liquid-Liquid Extraction**

M. Anwar, K. Lathrop, D. Rosskelly and P. V. Harper

**Preparation and Characterization of a <sup>99m</sup>Tc-Labeled Antimony Sulfide Colloid**

S. R. Lerner, J. J. Szafir, O. L. Pirtle, Jr. and F. J. Pircher

**Experiences With <sup>99m</sup>Tc-Labeled Antimony Sulfide Colloid as a Diagnostic Scanning Agent**

J. W. Stover, S. R. Lerner, E. Sopko, J. Pittman and F. J. Pircher

**Preparation and Application of a Stabilizer-Free <sup>99m</sup>Tc-Sulfide Colloid**

Charles K. Hellman, Janet Quirk and Donald R. Korst

**Estimation Of Spleen Size in Sickle-Cell Anemia with <sup>99m</sup>Tc-Sulfide Colloid**

L. D. Samuels and W. A. Newton Jr.

**Biologic Turnover and Toxicity of <sup>99m</sup>Tc-S Colloid**

Marvin B. Cohen, Leonard Spolter, Ezra Kleiner and David Masuoka

**System For The Quality Control Of Short-Lived Radiopharmaceuticals**

Mary C. Crews, James L. Quinn III and Nancy Bryant

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**INTERMISSION**

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**SESSION XXII**

**Radiopharmaceuticals—Tumor Localizing Agents**

**Chairman: William H. Beierwaltes**

**Tumor Localization Using Radioactive Metal-Hemoporphyrin Complexes**

R. Fawwaz, F. Frye, H. S. Winchell and J. H. Lawrence

**Radiiodinated Synkol as a Tumor Localizing Agent**

R. D. Ganatra, P. Ramanathan, M. C. Patel, M. N. Mehta, S. M. Sharma, R. S. Mani, O. P. D. Noronha and M. Blau

**Tumor Scanning with <sup>131</sup>I-Human Fibrinogen**

Kinichi Hisada, Tatsunosuke Hiraki, Tsutomu Mishima, Ryozo Watanabe, Kazumasa Yokoyama, Sadatake Kato and Takao Wakebayashi

**Scintillation Scanning of Malignant Melanomas with Radioiodinated Quinoline Derivatives**

William H. Beierwaltes, Vijay Varma, Raymond E. Counsell, Lionel M. Lieberman and Jose O. Morales

**Labeled Dopamine Concentration in Human Adrenal Medulla and in Neuroblastoma**

Lionel M. Lieberman, William H. Beierwaltes and Vijay Farma

**Labeled SrCO<sub>3</sub> Aggregates for Organ Scanning**

William G. Myers and William W. Hunter Jr.

**Endolymphatic Administration of <sup>131</sup>I Ethiodol in the Overall Treatment of Patients with Malignant Lymphoma**

Irving M. Ariel, Reubin Oropeza and Donna Galey

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**INTERMISSION**

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## KHORASSAN ROOM

SCIENTIFIC  
PROGRAM

## SESSION XXI

Lung Scintiscanning Procedures  
Clinical and Experimental Applications

Chairman: George V. Taplin

Regional Ventilation—Perfusion Determined by Rapid Scintillation Scanning  
Albert J. Gilson, Asher Marks, Edward M. Smith and William M. Smoak

Inhalation Perfusion Tracer Studies in Pediatric Chest Disease

Arvin E. Robinson and Jack K. Goodrich

Observations on the Return of Blood Flow Following Pulmonary Embolism

J. W. Winebright, A. J. Gerdes and W. B. Nelp

11-12:30 pm

Combined Inhalation and Perfusion Scanning as an Aide in the Evaluation of Pulmonary Tuberculosis

Felix J. Pircher, Thomas C. Black and S. R. Lerner

Perfusion Lung Scans in Bullous Lesions of the Lung

Bertram J. L. Sauerbrunn, Harold Weiss, Melvin M. Schiff and Peter C. Luchsinger

Regional Pulmonary-Function Studies in Canine Lung Allografts

Edgar L. Surprenant, G. Stevens, L. R. Bennett, Milo M. Webber and E. Fonkalsrud

Role of Nuclear Medicine in Clinical Pulmonary Physiology

John West

12:30-2 pm

## LUNCH

## SESSION XXIV

Pancreas, Parathyroid, Prostate and  
Placenta Scanning

Chairman: Richard E. Peterson

Diagnostic Efficacy of Dual-Channel Pancreas Scanning

Ervin Kaplan, Sidney Fink, Moshe Ben-Porath and Glenn D. Clayton

Comparison of the Diagnostic Accuracy of Arteriography with Liver and Pancreas Scans

A. Rodriguez-Antunez and R. Alfi

Use of <sup>75</sup>Se-selenocystine for Pancreatic Photoscanning

Juan F. Torres, Jr., Philip N. Brunner and Richard E. Peterson

2-3:30 pm

Pancreatic Concentration of Radioiodinated Phenylalanine  
Vijay Varma, William H. Beierwaltes, Raymond E. Counsell and Lionel M. Lieberman

Localization of Hyperfunctioning Parathyroid Adenomata Using Radioisotope Methods

Joseph B. Workman and Thomas B. Connor

Tissue Distribution of Toluidine Blue in Dogs

Gurprem S. Kang and Walter DiGiulio

Prostate Scintiscanning

G. S. Johnston, J. C. Wade, G. P. Murphy, E. Gotshall and W. W. Scott

Placental Localization by Scanning with <sup>113m</sup>In

Fred Mishkin, Isaac C. Reese, James Huddleston, James Carter and Philip DuBois

3:30-4 pm

## INTERMISSION

**CHASE CLUB**

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**SESSION XXIII**

**Radiopharmaceuticals—<sup>113m</sup>In Colloids**

**Chairman: Howard S. Stern**

**<sup>113m</sup>In as a Routine Scanning Agent in Turkey**  
Fevzi Renda, Ali Tan Isitman, Munir Telatar and Howard S. Stern

**Distribution of <sup>113m</sup>In in Labeled Colloids**  
Lelio G. Colombetti, Russell Hermanson and David A. Goodman

**Simple Technique for Organ Scanning Using <sup>113m</sup>In**  
J. F. Filbee

**Evaluation of Iodine Compounds Synthesized for Brain Scanning**  
John A. Burdine, Jr., Thomas A. Waltz, Frederick A. Matsen, Jr. and Fred Rapp

**Properties and Uses of Radioactive Albumin Microspheres**  
Ilse Zolle, Buck A. Rhodes, Julia W. Buchanan and Henry N. Wagner, Jr.

**<sup>113m</sup>In Microcolloid—An Optimal Radiopharmaceutical for Liver and Spleen Scanning**  
M. H. Adatepe and E. James Potchen

**Internal Absorbed-Dose Calculations for <sup>113m</sup>In**  
S. Ibrahim

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**LUNCH**

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**SESSION XXVI**

**Experimental Nuclear Medicine—GI Tract,  
Liver and Lung**

**Chairman: Thomas P. Haynie**

**Experimental Studies on the Gastric Secretion of Sodium Pertechnetate in Rats**  
J. Abels and A. Bartelink

**Quantitation of <sup>99m</sup>Tc Localization in the Stomach and Intestine after Intravenous Administration of Na <sup>99m</sup>Tc O<sub>4</sub> in Humans**  
K. A. Lathrop and Paul V. Harper

**Application of Catheter-Type Semiconductor Radiation Detector Inserted into the Gastrofiberscope for Diagnosis of Upper GI Tract Malignancy**  
Sei-ichi Takayanagi, Tetsuji Kobayashi, Tohru Sugita, Hideo Ueda, Haruo Kameda, Ryshi Sassa, Masahiro Iio and Yasuhito Sasaki

**Distribution and Scintiphotography Studies of a New Liver Scanning Agent: <sup>99m</sup>Tc-Toluidine Blue O Colloid**  
Shin-Hwa Yeh, J. E. Delahay and Joseph P. Kriss

**Simplified Procedure for the Preparation of <sup>131</sup>I Labeled Sulfobromophthalein: its Applications to Liver Scanning**  
Romsai Suwanik and Manuel Tubis

**Radioactive Agents in the Investigation Of Liver-Tumor Circulation**  
Norman B. Ackerman

**Limitations of Quantitating Regional Pulmonary Perfusion by Lung Scanning**  
Norman D. Poe

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**INTERMISSION**

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**SCIENTIFIC  
PROGRAM**

**SESSION XXV**

**Skeletal and Joint Disease Scanning**

**Chairman: Alexander Gottschalk**

**Whole-Body-Survey Scintiscanning for Bone Metastases**  
Frederick L. Benoit, Juan F. Torres Jr. and Richard E. Peterson

**Detection of Secondary Tumors of Bone Using  $^{18}\text{F}$  and  $^{85}\text{Sr}$  in Conjunction with the Anger Positron and Gamma Camera and Mark II Whole Body Scanner**  
Peter Ronaj, H. S. Winchell and H. O. Anger

**Sequential Strontium Bone Scans in Multiple Myeloma**  
N. David Charkes and John Durant

**Scanning of Soft-Tissue Calcification with Radiostrontium-85**  
Robert J. Griep

**$^{85}\text{Sr}$  Scans in the Diagnosis of Devascularized Bone**  
J. B. Redekop, B. R. Walske, R. S. Hoge, E. C. Brodie and J. C. Towne

**Pharmacology of Intra-Articularly Injected  $^{195}\text{Au}$ -Labeled Myochrysin (Sodium Aurothiomalate) Used as Diagnostic and Therapeutic Aid in Rheumatoid Arthritis**  
Norman L. Gottliebe and Edward M. Smith

**Absorbed-Dose Estimates for Radiopharmaceuticals Used for Bone Scanning**  
Edward M. Smith and John G. McAfee, James M. Mozley and William M. Smoak

**Diagnostic Use of  $^{85}\text{Sr}$  Scintimetry in Orthopedics**  
Göran C. H. Bauer

4-5:30 pm

5:30 pm

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**ADJOURN**

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**SESSION XXVII**

**Brain Scanning—Experimental and Clinical**

**Chairman: Joseph P. Kriss**

**Radioautographic Demonstration of the Cellular Localization of  $^{203}\text{Hg}$ -Chlormerodrin in Various Brain Tumors**  
**George L. Jackson, M. L. Corson, Jane Baxter and Nancy Blosser**

**Study of Human Brain Tumor Cell Affinity for Specific Radioisotopes**  
**Rozella Knox, Ulrich Batzdorf and John C. Kennady**

**Tissue Vascularity in Positive Brain Scans**  
**Howard J. Cohen and Manfred H. Soiderer**

**Immediate Assessment of Gamma-Camera Dynamic Studies Using a Small Digital Computer**  
**R. E. Bentley, E. James Potchen and V. W. Gerth**

**Regional Cerebral Blood Flow in Cerebrovascular Accidents and Generalized Cerebral Arteriosclerosis by means of Rapid Serial 35-mm Scintiphotographs**  
**Carol J. Imbornone, William Lane and David A. Goodwin**

**RISA Myeloencephalography in the Differential Diagnosis and Treatment of Hydrocephalus**  
**Robert L. Bell and William G. Jones**

**Basis for Accurate Scintiphotographic Detection of Subdural Hematoma**  
**Mathews B. Fish, Robert L. Koch, Myron Pollycove, Sean O'Reilly and Archie Khentigan**

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**ADJOURN**

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**INVITED SPEAKERS AT ANNUAL MEETING**

Two invited speakers will participate in the 15th Annual Meeting of the Society of Nuclear Medicine. They are:

**Niels A. Lassen**

Dept. of Clinical Pharmacology, Dispebjerg Hospital, Copenhagen, Denmark

(Sponsored by the Edward Mallinckrodt Institute of Radiology, Washington Univ. School of Medicine, St. Louis, Mo.)

**John West**

Hammersmith Hospital, London, England

(Sponsored by the St. Louis University as its Sesquicentennial Speaker—part of the University's celebration of its 150th Anniversary.)