

MATERIALS LICENSE

Amendment No. 85

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below, to use such material for the purposes and at the places designated below, to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee

- 1 E. R. Squibb and Sons, Inc.
2 One Squibb Drive
P. O. Box 191
New Brunswick, New Jersey 08903-0191

In accordance with letter dated
August 5, 1992,

- 3 License number 29-00139-02 is amended in
its entirety to read as follows:

4 Expiration date April 30, 1997

5 Docket or
Reference No 030-05222

- | 6 Byproduct, source, and/or special nuclear material | 7 Chemical and/or physical form | 8 Maximum amount that licensee may possess at any one time under this license |
|--|-------------------------------------|---|
| A. Any byproduct material with Atomic Nos. 1-83 inclusive, except Strontium 90 | A. Any | A. 5 curies per radionuclide and 1000 curies total |
| B. Iodine 131 | B. Any | B. 150 curies |
| C. Molybdenum 99/Technetium 99m | C. Any | C. 500 curies |
| D. Any byproduct material with Atomic Nos. 1-83 inclusive, except Strontium 90 | D. Any | D. 200 millicuries per radionuclide and 6 curies total |
| E. Hydrogen 3 | E. Any | E. 5 curies |
| F. Carbon 14 | F. Any | F. 4 curies |
| G. Phosphorus 33 | G. Any | G. 1 curie |
| H. Sulfur 35 | H. Any | H. 2 curies |
| I. Iodine 125 | I. Any | I. 500 millicuries |
| J. Iodine 131 | J. Any | J. 500 millicuries |
| K. Any byproduct with Atomic Nos. 1 through 83 inclusive, except Strontium 90 | K. Any | K. Not to exceed 10 millicuries per radionuclide and 1 curie total |
| L. Hydrogen 3 | L. Any | L. 50 millicuries |
| M. Hydrogen 3 | M. Any | M. 40 millicuries |
| N. Carbon 14 | N. Any | N. 40 millicuries |
| O. Phosphorus 32 | O. Any | O. 100 millicuries |
| P. Phosphorus 33 | P. Any | P. 200 millicuries |
| Q. Sulfur 35 | Q. Any | Q. 300 millicuries |
| R. Iodine 125 | R. Any | R. 20 millicuries |
| S. Nickel 63 | S. Plated sources in detector cells | S. Not to exceed 15 millicuries per source and 750 millicuries total |

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PDR ADOCK 03005222
C PDR

Information in this record was deleted in
accordance with the Freedom of Information Act.
Exemptions 6
FOIA b 2011-0063

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

29-00139-02

Docket or Reference number

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9. Authorized use:

- A., B., and C. (1) Research and development as defined in 10 CFR 30.4.
(2) For possession use and processing incident to the manufacture of radiochemicals and radiopharmaceuticals.
(3) For storage prior to distribution of manufactured radiochemicals and radiopharmaceuticals.
(4) For packaging and distribution of manufactured radiochemicals and radiopharmaceuticals to persons authorized to receive the licensed material pursuant to the term and conditions of a specific license issued by the Nuclear Regulatory Commission or an Agreement State.
- D. through S. Research and development as defined in 10 CFR 30.4.

CONDITIONS

10. A. Licensed material in Items 6.A., 6.B., 6.C. and 6.S. may only be used at licensee's facilities at One Squibb Drive, New Brunswick, New Jersey.
B. Licensed material in Items 6.D. through 6.H. and 6.S. may only be used at licensee's facilities at the Convalec facility at 200 Headquarters Drive, Skillman, New Jersey.
C. Licensed material in Items 6.D. through 6.J., and 6.S. may only be used at Route 206 and Provinceline Road, Lawrenceville, New Jersey.
D. Licensed material in Items 6.K., 6.L., and 6.S., may only be used at licensee's facilities, Princeton House, 905 Herrontown Road, Princeton, New Jersey.
E. Licensed material in Items 6.M. through 6.S., may be used only at the licensee's facilities at 675 College Road East, Princeton Forrestal Center, Plainsboro, New Jersey.
11. A. Licensed material shall be used by, or under the supervision of, individuals designated by the licensee's Radiation Safety Committee.
B. The Radiation Safety Officer for this license is Daniel K. Balkunow.
12. This license does not authorized commercial distribution of licensed material to persons generally licensed pursuant to 10 CFR 31 or to persons exempt from licensing pursuant to 10 CFR 30.18.
13. The licensee shall not use licensed material in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license.
14. Experimental animals administered licensed materials or their products shall not be used for human consumption.

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(Continued)

CONDITIONS

15. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed 3 years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen 3; or
 - (ii) they contain only a gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source involved, the test results, and corrective action taken.

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(15. Continued)

CONDITIONS

- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
16. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in 10 CFR 20.203(a)(1), the licensee is hereby authorized to label detector cells and cell baths, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols.
17. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding that specified by the manufacturer.
18. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory.
19. The licensee shall not acquire licensed material in a sealed source or in a device that contains a sealed source unless the source or device has been registered with the Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State.
20. The licensee may transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."
21. The licensee shall maintain and execute the response measure of his Radiological Emergency Contingency Plan submitted to the Commission on March 28, 1990. The licensee shall also maintain procedures as necessary to implement the plan. The licensee shall make no change in his Radiological Emergency Contingency Plan that would decrease the response effectiveness of the plan without prior Commission approval as evidenced by license amendment. The licensee may make changes to his Radiological Emergency Contingency Plan without prior Commission approval if the changes do not decrease the response effectiveness of the plan, and shall maintain records of changes that are made to the plan without prior approval for period of two years from the date of the changes and shall furnish the Chief, Nuclear Materials Safety Branch, Division of Radiation Safety and Safeguards, U.S. Nuclear Regulatory Commission, Region 1, 475 Allendale Road, King of Prussia, Pennsylvania 19406, a report containing a description of each change within six months after the change is made.
22. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days and sulfur-35, scandium-46, strontium-85, and tin-113 for decay-in-storage before disposal in ordinary trash provided:
- A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.

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(22. Continued)

CONDITIONS

- B. Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
23. The licensee shall not store licensed material contained in waste for more than two (2) years from the date the waste is put into storage or November 1, 1992, whichever is later. The licensee shall maintain records which indicate the date that licensed material contained in waste is put into storage. This condition does not apply to licensed material intended for disposal by decay-in-storage pursuant to 10 CFR 35.92 or other conditions of this license.
24. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated February 28, 1989
 - B. Letter dated June 16, 1989
 - C. Letter dated October 4, 1989
 - D. Radiological Contingency Plan dated March 28, 1990
 - E. Letter dated May 17, 1990
 - F. Letter dated May 24, 1990
 - G. Letter dated July 24, 1990
 - H. Letter dated April 15, 1991
 - I. Letter dated November 25, 1991
 - J. Letter dated December 11, 1990
 - K. Letter dated March 23, 1992
 - L. Letter dated May 8, 1992
 - M. Letter dated August 5, 1992

Date

August 1, 1992

For the U.S. Nuclear Regulatory Commission

Original Signed By:

Elizabeth Ulrich

By

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

OCT 16 1992

License No. 29-00139-02
Docket No. 030-05222
Control No. 116972

E. R. Squibb & Sons, Inc.
ATTN: Daniel K. Balkunow
Radiation Safety Officer
One Squibb Drive
P.O. Box 191
New Brunswick, New Jersey 08903-0191

Dear Mr. Balkunow:

Please find enclosed an amendment to your NRC Material License.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the Region I Material Licensing Section, (215) 337-5093, so that we can provide appropriate corrections and answers.

Your license has been amended to limit the time that you may store radioactive waste. Due to the possibility that licensees may be denied access to burial sites, licensees who do not have approved waste storage plans are being prohibited from storing radioactive waste for more than two (2) years. This storage time limitation should be sufficient to support normal operations. If you desire to have this condition removed from your license and be permitted to store waste for a longer time period, you should submit a request to amend your license containing the information contained in NRC Information Notice No. 90-09.

Please be advised that you must conduct your program involving licensed radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, please note the items in the enclosed, "Requirements for Materials Licensees."

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, the NRC expects licensees to pay meticulous attention to detail and to achieve the high standard of compliance which the NRC expects of its licensees.

You will be periodically inspected by NRC. A fee may be charged for inspections in accordance with 10 CFR Part 170. Failure to conduct your program safely and in accordance with NRC regulations, license conditions, and representations made in your

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E. R. Squibb & Sons, Inc.

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license application and supplemental correspondence with NRC will result in prompt and vigorous enforcement action against you. This could include issuance of a notice of violation, or in case of serious violations, an imposition of a civil penalty or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

We wish you success in operating a safe and effective licensed program.

Sincerely,

Original Signed By:

Elizabeth Ullrich

f
Steven L. Baggett, Chief
Research, Development and
Decommissioning Section
Division of Radiation Safety
and Safeguards

Enclosures:

1. Amendment No. 85
2. Requirements for Materials Licensees

DRSS:RI
Arredondo/cmm

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fr
DRSS/RI
Baggett

10/14/92

NRC FORM 218

(4-78)

NRCM 6240

U.S. NUCLEAR REGULATORY COMMISSION

DATE

TIME

A.M.

P.M.

TELEPHONE OR VERBAL CONVERSATION RECORD

☐ INCOMING CALL☐ OUTGOING CALL☐ VISIT

PERSON CALLING

OFFICE/ADDRESS

PHONE NUMBER

EXTENSION

PERSON CALLED

OFFICE/ADDRESS

PHONE NUMBER

EXTENSION

CONVERSATION

SUBJECT

SUMMARY

I-131 500 mCi

I-125 500 mCi

Lawrenceville need these passless limit
use: R & D only

Waste Storage up to 2 years.

Will ^{Submit} Waste Storage plan
at later time.

REFERRED TO:

ACTION REQUESTED

ACTION TAKEN

☐ ADVISE ME OF
ACTION TAKEN

INITIALS

DATE

INITIALS

DATE

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Bristol-Myers Squibb Company

Pharmaceutical Group Technical Operations

One Squibb Drive, P.O. Box 191, New Brunswick, NJ 08903-0191 201 519-2000

030-05222

August 5, 1992

Ms. E. Ullrich
Nuclear Material Safety Section B
Division of Radiation Safety and Safeguards
U.S. Nuclear Regulatory Commission
Region I
Allendale Road
King of Prussia, PA 19406

RE: **LICENSE AMENDMENT**
LICENSE #29-00139-02

Log	Aug 11 1992
Remitter	Bristol-Myers Squibb Co.
Check No.	269865
Amount	\$250 - Refund \$20
Fee Category	3A
Type of Fee	Amo
Date Check Rec'd	8/11/92
Date Completed	
By	B. Brown

Dear Ms. Ullrich:

This is a request to amend the byproduct material license (#29-00139-02) of E. R. Squibb & Sons, Inc., a wholly-owned subsidiary of the Bristol-Myers Squibb Company, to include the following items:

A. Radioiodinations - Lawrenceville

Currently no unbound I^{131} or I^{125} can be processed on the Bristol-Myers Squibb Lawrenceville site. Due to the consolidation and realignment of R&D personnel in the state of New Jersey, Bristol-Myers Squibb will, upon commission approval, perform radioiodinations at its Lawrenceville site.

Three radioiodination laboratories have been constructed and will be used for the processing of volatile iodine. Listed below is a description of these facilities:

□ Facility Description

- The radioiodination laboratories will be negative to the surrounding area with respect to air flow.
- The face velocity of the glove boxes will be \geq 100 FPM and exhaust air flow will be measured on a monthly basis as per our license activity.
- Air exhaust duct work will be fabricated of Type 304 stainless steel.

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- All room and glove box air will be exhausted through 300x pleated panel filters of 35% ASHRE efficiency followed by 99.97% HEPA and finally through a series of three charcoal absorbers with a minimum of 1" bed. The absorber cells will be constructed of Type 304 stainless steel.
- Before released to the environment via the stack, air exhausts will be isokinetically sampled and monitored to ensure compliance with 10CFR20.106.
- All filter banks and vacuum pumps will be provided with 100% stand-by units (redundant).
- Fan and vacuum pumps will be provided with uninterruptible electrical power supply.
- Radiolodinations will not exceed 15 mCi of I^{125}/I^{131} per procedure.
- The three radiolodination laboratories are located in H Building, Room No. 4613 and K Building, Room Nos. 3622 and 4319.
- Each of the three laboratories will be provided with air sampling devices that will be located where they would sample near the potential source of airborne radionuclides.
- Air sampling devices will monitor the radioactive air stream before and after each filter train to determine their overall efficiency.

B. Ancillary Support Areas - Radioactive Waste Storage

To support the radiolodination activities in Lawrenceville, a major renovation of the radioactive waste storage area is under construction. A brief outlined description of the facility is listed below:

□ Facility Description

- The renovated radioactive waste storage is approximately 24 x 44 feet enclosed area built of masonry and fire rated wall board.

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- Within the enclosure are two custom designed ventilated hoods; one to ventilate the processing of radioactive laboratory waste collection pails and another to ventilate radioactive waste consolidation drums.
- All room and hood air is exhausted through a filter train that consists of a rough filter, 99.97% HEPA and 2 each activated charcoal filters with 1" minimum bed. They will be constructed of type 304 stainless steel.
- The waste storage area will be negative to the surrounding space to preclude any migration of radioactive effluents to these areas.
- Prior to being released to the environment, via a stack, air exhausts will be isokinetically sampled and monitored to ensure compliance with 10CFR20.106.
- Multiple air sampling devices will be strategically placed within the confines of the waste area and will be located near any potential source of airborne radionuclides.
- Filter assembly will be constructed of Type 304 stainless steel.
- Air sampling devices will monitor, on a periodic basis, the radioactive air stream before and after each filter train to determine their overall efficiency.

C. Bioassay Program

As described in Bristol-Myers Squibb's licensing activities (letter to the commission dated May 24, 1990), "Workers who use greater than one millicurie of I-131 or I-125 in research and development are required to assay their thyroid for potential uptake."

D. Site Possession Limit - I¹³¹

To support proposed radiolodination activities, Bristol-Myers Squibb would like to establish a maximum of 500 mCi of I¹³¹ that it may possess at any one time, under its license at the Lawrenceville, New Jersey facility. This material would be in any form and will be used for R&D purposes as defined in Section 30.4 (c) of 10CFR30.

Ms. E. Ullrich
NRC License Amendment Request
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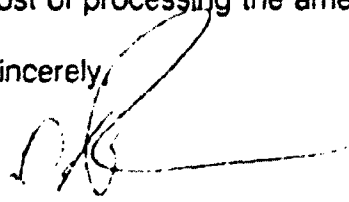
E. Radiation Safety Committee

Please amend the Bristol-Myers Squibb radioactive materials license to include H. William Strauss, M.D., as a member of the Radiation Safety Committee. For your file, enclosed is a copy of Dr. Strauss's "Curriculum Vitae".

All activities involving the use of radioactive materials will be conducted in accordance with E. R. Squibb & Sons, Inc. overall radiation safety program as described in its NRC license.

Included is Bristol-Myers Squibb Company check #269865 for \$250.00 to cover the cost of processing the amendment.

Sincerely,



Daniel K. Balkunow
Radiation Safety Officer

DKB:bl

Enclosures (2)

- (1) Curriculum Vitae - H. William Strauss, M.D.
- (2) B-MS Check #269865, \$250.00 for amendment fee

Howe-Lewis International

Palo Alto-New York-London-Hong Kong-Sydney

525 University Avenue, Suite 825
Palo Alto, California 94301

CURRICULUM VITAE

(415) 324-4430
FAX (415) 323-9326

Name: H. William Strauss, M.D.

Address:

(b)(6)

Date of Birth:

(b)(6)

Place of Birth:

(b)(6)

Education:

(b)(6)

Yeshiva College (No Degree)
State University of New York
Downstate Medical Center

Postdoctoral Training:

Internships and Residencies:

1965-1966	Intern in Straight Medicine, State University of New York, Downstate Medical Center, Brooklyn, NY
1966-1967	Jr. Assistant Resident in Medicine, State University of New York, Downstate Medical Center, Brooklyn, NY
1967-1968	Assistant Resident in Medicine, Bellevue Hospital, New York Division, New York, NY

Fellowships:

1968-1970	Fellow, Nuclear Medicine, The Johns Hopkins Hospital, Baltimore, MD
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Licensure and Certification

1967	Maryland License
1965	New York License
1966	Pennsylvania License
1970	California License
1976	Massachusetts License
1972, 1989	American Board of Nuclear Medicine - #01242

Academic Appointments:

1972-1975	Assistant Professor of Medicine, Johns Hopkins University School of Medicine
1972-1975	Assistant Professor of Environmental Health, Johns Hopkins University School of Hygiene and Public Health
1975-1976	Associate Professor of Radiology, Johns Hopkins University School of Medicine

1975-1976	Associate Professor of Environmental Health, Johns Hopkins University School of Hygiene and Public Health
1977-	Adjunct Clinical Professor in Nuclear Medicine, Massachusetts College of Pharmacy
1976-1982	Associate Professor of Radiology at the Massachusetts General Hospital, Harvard Medical School
1982-	Professor of Radiology at the Massachusetts General Hospital, Harvard Medical School

Hospital Appointments:

1975-1976	Associate Professor in Radiology, Division of Nuclear Medicine, Johns Hopkins University School of Medicine
1975-1976	Associate Professor in Environmental Health, Division of Radiation Health, Johns Hopkins University School of Hygiene and Public Health
1976-1979	Associate Radiologist, Department of Radiology, Division of Nuclear Medicine, Massachusetts General Hospital
1979-	Radiologist, Department of Radiology, Division of Nuclear Medicine, Massachusetts General Hospital
1981-	Courtesy Staff, Nuclear Medicine Department, Mount Auburn Hospital

Other Professional Positions and Major Visiting Appointments:

1970-1972	Co-Director, Division of Nuclear Medicine, David Grant Medical Center, Travis Air Force Base, California
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Awards and Honors

1973	Casimir Funk Award - Association of Air Force Physicians
1975	Second Annual Wilhelmina S. Scott Memorial Lecturer Lancaster, PA
1975	New Horizons' Lecturer of the Radiological Society of North America
1979	Dr. William Beaumont Award in Medicine American Medical Association
1980	Canadian Heart Foundation Lecturer
1980	First Annual George V. Taplin Memorial Lecturer, Joint Northern and Southern California Chapters of the Society of Nuclear Medicine
1982	Herrman L. Blumgart M.D. Pioneer Award, NE Chapter of the Society of Nuclear Medicine
1986	Distinguished Johns Hopkins Nuclear Medicine Alumnus Award
1987	6th Annual Philip M. Johnson Memorial Lecture

1987

New York, NY
Sarabhai Memorial Oration - Indian Society of
Nuclear Medicine, India

Major Committee Assignments:

National and Regional:

1979-1987 Advisory Committee, Federal Drug
Administration, Bethesda, MD
1988- Medical Expert Advisory Committee on
Disciplinary Matters, Board of Registration
in Medicine

Hospital:

1976 Staff Committee, Department of Radiology,
Massachusetts General Hospital
1977 Isotope Committee, Massachusetts General
Hospital
1977 Education Committee, Department of Radiology,
Massachusetts General Hospital
1977 Subcommittee on Nuclear Medicine and Education
Committee, Department of Radiology,
Massachusetts General Hospital
1980-1982 Research Committee, Massachusetts General
Hospital
1984- Research Committee, Massachusetts General
Hospital

Editorial Boards

1979-84 Editorial Board, Circulation
1980- Editorial Board, American Journal of Cardiology
1981- Editorial Board, Journal of Nuclear Medicine
1980-85 Editorial Board, Journal of American College of
Cardiology

**Memberships, Offices and Committee Assignments in Professional
Societies:**

1965 New York Academy of Science
1966 Society of Nuclear Medicine
1969 American Federation for Clinical Research
1972 American Heart Association
1975 American College of Nuclear Physicians
1975 Consultant, Program Committee, American Heart
Association
1976 New England Chapter, Society of Nuclear
Medicine
1977-1978 Curriculum Subcommittee of the Standing
Committee
on Education and Training
1977 Instrumentation Council, Society of Nuclear
Medicine

1977	Program and Continuing Education Committee, Society of Nuclear Medicine
1977-1979	Local Arrangements Chairman, NE Chapter, Society of Nuclear Medicine
1979	Program Chairman, NE Chapter, Society of Nuclear Medicine
1978	Committee of Radiologic Oncologic Studies, Subcommittee on Ear Medicine
1979	Program Chairman, NE Chapter, Society of Nuclear Medicine
1978	Committee of Radiologic Oncologic Studies, Subcommittee on Nuclear Medicine Imaging
1978	Syllabus Committee, Society of Nuclear Medicine
1978	Scientific Exhibits Committee, Society of Nuclear Medicine
1978	American College of Radiology, ACR III Syllabus Committee
1979	Association of University Radiologists
1979	Academic Council, Society of Nuclear Medicine
1979	Competence and Certification Committee, Society of Nuclear Medicine
1979	Education and Training Committee, Society of Nuclear Medicine
1979	Massachusetts Medical Society
1980	Committee on Scientific Affairs, Massachusetts Medical Society
1980	Councilor, Massachusetts Medical Society
1980	Fellow, American College of Cardiology
1980	Board of Trustees, Society of Nuclear Medicine
1981	American Society for Clinical Investigation
1983	Society of Thoracic Radiology
1984	Fellow, American College of Nuclear Physicians
1987	American Society for Clinical Investigation Emeritus Member

Major Research Interests:

The application of Nuclear Medicine to the study of
pathophysiology.

Grant Support

1985-1991	NHLBI, Heart Imaging With Single Photon Imaging Agents PI: H. William Strauss, M.D.
1982-	Mallinckrodt, Inc. Research Myocardial Imaging Agents PI: H. William Strauss, M.D.
1984-	Cambridge Research Lab Development of Radiolabeled Antibodies for the Imaging of Infectious Disease PI's: H. William Strauss, M.D., and Robert Rubin, M.D.
1985-	Capintec, Inc. The Vest PI: H. William Strauss, M.D.

ORIGINAL ARTICLES

1. Strauss HW, Smith RB, Polemoni P, Schenker AC, Schenker VJ, and Stuckey JH: Plasma serotonin levels in stored human blood. *Angiology*, 1967; 18:535.
2. Caggiano VR, Schnitzler W, Strauss HW, Baker RK, Carter AC, Josephson AS and Wallach S: Zinc deficiency in a patient with retarded growth hypogonadism. Hypogammaglobulinemia and chronic infection. *Amer J Med Sci* 1969; 105:257.
3. Strauss HW, Hurley PJ, Rhodes BA and Wagner HN Jr: Quantification of right to left transpulmonary shunts in man. *J Lab Clin Med* 1969; 14:597.
4. Strauss HW, Natarajan TK, Sziklas JJ, Poulos KP, Fukushima T and Wagner HN Jr: Computer assistance in the interpretation and quantification of lung scans. *Radiology* 1970; 97:277.
5. Strauss HW, Hurley PJ and Wagner HN Jr: Advantages of ^{99m}Tc-pertechnetate for thyroid scanning in patients with decreased radioiodine uptake. *Radiology* 1970; 97:307.
6. Hurley PJ, Strauss HW and Wagner HN Jr: Radionuclide angiocardiology in cyanotic congenital heart disease. *John Hopkins Med J* 1970; 127:46.
7. James AE, Strauss HW, Fischer K, Wheelless CR and Longo R: Placental imaging with ^{113m}In transferrin and ^{99m}Tc-serum albumin. *Obst Gyn* 1971; 37:602.
8. Dujovne CA, Strauss HW: Changes in liver and spleen scans of patients during treatment with two hypolipidemic drugs. *Radiology* 1971; 37:602.
9. James AE, Conway JJ, Chang CH, Cooper M, White RI and Strauss HW: The fissure sign: Its multiple causes. *Amer J Roentgenol* 1971; 61:492.
10. Strauss HW, Zaret BL, Hurley PJ, Natarajan TK, Pitt B: A scintiphotographic method for measuring left ventricular ejection fraction in man without cardiac catheterization. *Amer J Card* 1971; 28:575.
11. Hurley PJ, Strauss HW, Pavoni P, Langan JK and Wagner HN: The scintillation camera with pinhole collimator in thyroid imaging. *Radiology* 1971; 101:133-138.
12. Zaret BL, Strauss HW, Hurley PJ, Natarajan TK, Pitt B: A non-invasive scintiphotographic method for detecting regional ventricular dysfunction in man. *N Engl J Med* 1971; 284:1165.

13. Moses DC, James AE, Strauss HW, Wagner HN Jr: Regional blood flow estimation in the diagnosis of cerebrovascular disease. J Nucl Med 1972; 13:135.

14. Strauss HW, James AE, Hurley PJ, DeLand FH, Moses DC, Wagner HN: Nuclear cerebral angiography: Usefulness in the differential diagnosis of cerebrovascular disease and tumor. Arch Intern Med 1973; 131:211.

15. Zaret BL, Strauss HW, Martin ND, Wells HP, Flamm MD: Noninvasive regional myocardial perfusion with radioactive potassium: Study of patients at rest with exercise during angina pectoris. N Engl J Med 1973; 288:809-812.

16. Strauss HW, Zaret BL, Martin ND, Wells HP, Flamm MD: Noninvasive evaluation of regional myocardial perfusion with potassium-43: Technique in patients with exercise induced transient myocardial ischemia. Radiology 1973; 108:85.

17. Zaret BL, Stenson RL, Martin ND, Strauss HW, Wells HP, McGowan RL, Flamm MD: Potassium-43 myocardial perfusion scanning for the noninvasive evaluation of patients with false-positive exercise test. Circulation 1973; 48:1234.

18. Wagner HN Jr, Strauss HW: A new approach to coronary heart disease. Circulation 1973; 48:229 (Editorial).

19. Zaret BL, Martin ND, McGowan RL, Strauss HW, Wells HP, Flamm MD: Rest and exercise potassium-43 myocardial perfusion imaging for the noninvasive evaluation of aortocoronary bypass surgery. Circulation 1974; 49:668.

20. Strauss HW, Pitt B: Cardiovascular nuclear medicine. Its role in patients with coronary heart disease. Cardiovas Nucl Med 1974.

21. Prokop EK, Buddemeyer EU, Strauss HW, Wagner HN: Detection of an occult vesicoentric fistula. Am J. Roentgenol 1974; 121:811-818.

22. Rigo P, Murray M, Strauss HW, Pitt B: Scintiphotographic evaluation of patients with suspected left ventricular aneurysm. Circulation 1974; 50:895-901.

23. Rigo P, Strauss HW, Taylor D, Kelly D, Weisfelt M, Pitt B: Left ventricular function in acute myocardial infarction evaluated by gated scintiphotography. Circulation 1974; 60:678-683.

24. Prokop EK, Strauss HW, Shaw J, Pitt B, Wagner HN: Comparison of regional myocardial perfusion determined by ionic potassium-43 to that determined by microspheres. Circulation 1974; 50:978-984.

25. Martin ND, Zaret BL, Strauss HW, Wells HP, Alberts J: Myocardial imaging using K-43 and the gamma camera. Radiology 1974; 112:446-448.
26. Rigo P, Strauss HW, Pitt B: The combined use of gated blood pool scanning and myocardial imaging with potassium-43 in the evaluation of patients with myocardial infarction. Radiology 1975; 115:387.
27. Strauss HW, Harrison K, Langan JK, Lebowitz E, Pitt B: Thallium-201 for myocardial imaging: Relation of thallium-201 to regional myocardial perfusion. Circulation 1975; 51:641.
28. Oster ZH, Larson SM, Strauss HW, Wagner HN: An analysis of liver scanning in a general hospital. J Nucl Med 1975; 16:450-453.
29. Sostre S, Martin ND, Lucas RN, Strauss HW: Scintigraphic findings in primary amyloidosis. Radiology 1975; 115:675-677.
30. Rigo P, Murray M, Taylor DR, Weisfeldt M, Kelly DT, Strauss HW, Pitt B: Right ventricular dysfunction detected by gated scintiphotography in patients with acute inferior myocardial infarction. Circulation 1975; 52:268-274.
31. Rossman DJ, Rouleau J, Strauss HW, Pitt B: Detection and sizing of acute myocardial infarction with 99mTc-glucoheptonate. J Nucl Med 1975; 16:980-985.
32. Rossman DJ, Strauss HW, Siegel ME, Pitt B: Accumulation of 99mTc-glucoheptonate in acutely infarcted myocardium. J Nucl Med 1975; 16:875-878.
33. Schulz RA, Rouleau J, Rigo P, Bowers S, Strauss HW, Pitt B: Left ventricular function and ventricular arrhythmias in the late hospital phase of acute myocardial infarction. Circulation 1975; 52:1006-1010.
34. Bulkley BH, Rouleau J, Strauss HW, Pitt B: Idiopathic hypertrophic subaortic stenosis: Detection by thallium-201 myocardial perfusion imaging. N Engl J Med 1975; 293:1113-1116.
35. Rigo P, Murray M, Taylor DR, Weisfeldt M, Strauss HW, Pitt B: Hemodynamic and prognostic findings in patients with transmural and non-transmural infarction. Circulation 1975; 51:1064.
36. Feigin DS, Strauss HW, James AE: The bone marrow scan in experimental osteomyelitis. Skeletal Rad 1976 1:103-108.
37. Adachi H, Strauss HW, Ochi H, Wagner HN: The effect of hypoxia on the regional distribution of cardiac output in the dog. Circ Res 1976; 39:314-319.

38. Cook DJ, Bailey I, Strauss HW, Rouleau J, Wagner HN, Pitt B: Thallium-201 for myocardial imaging: Appearance of the normal heart. J Nucl Med 1976; 17:583-589.

39. Wiseman J, Rouleau J, Rigo P, Strauss HW, Pitt B: Gallium-67 myocardial imaging for the detection of bacterial endocarditis. Radiology 1976; 120:135-138.

40. Bailey IK, Griffith LSC, Rouleau J, Strauss HW, Pitt B: Thallium-201 myocardial perfusion imaging at rest and exercise: Comparative sensitivity to electrocardiography in coronary artery disease. Circulation 1977; 55:79-87.

41. Bulkley BH, Hutchins CM, Bailey IK, Strauss HW, Pitt B: Thallium-201 imaging with gated cardiac blood pool scans in patients with ischemic and idiopathic congestive cardiomyopathy. Circulation 1977; 55:753-760.

42. Cohen HA, Baird MG, Rouleau JR, Fuhrmann CF, Bailey IK, Summer WR, Strauss HW and Pitt B: Thallium-201 myocardial imaging in patients with pulmonary hypertension. Circulation 1976; 54:790-795.

43. Weich H, Strauss HW, D'Agostino R, Pitt B: Determination of extraction fraction by a double isotope method. J Nucl Med 1977; 18:226-230.

44. Weich H, Strauss HW, Pitt B: The extraction of thallium-201 by the myocardium. Circulation 1977; 56:188-191.

45. Schulze RA, Strauss HW, Pitt B: Sudden death in the year following myocardial infarction: Relation to ventricular premature contractions in the late hospital phase and left ventricular ejection fraction. Am J Med 1977; 62:192-199.

46. Bailey IK, Rouleau JR, Griffith LSC, Strauss HW, Pitt B: Myocardial perfusion imaging to detect patients with single and multivessel disease. Herz 1977; 2:135-137.

47. Pitt B and Strauss HW: Combined use of thallium-201 myocardial perfusion imaging and gated cardiac blood pool imaging. Herz 1977; 2:212-214.

48. McGowan RL, Martin ND, Zaret BL, Hall RR, Bryson AL, Strauss HW and Flamm MD: Diagnostic accuracy of noninvasive myocardial imaging for coronary artery disease: An electrocardiographic and angiographic correlation. Am J Card 1977; 40:6-10.

49. Burow RD, Strauss HW, Singleton R, Pond M, Rehn R, Bailey IK, Griffith LC, Nickoloff E, Pitt B: Analysis of left ventricular function from multiple gated acquisition (MUGA) cardiac blood pool imaging: Comparison to contrast angiography. Circulation 1977; 56:1:1024-1028.

50. Strauss HW, Harrison K, Pitt B: Thallium-201 non-invasive determination of the regional distribution of cardiac output. J Nucl Med 1977; 18:1167-1170.
51. Nichols AB, Pohost GM, Gold HK, Leinbach RC, Beller GA, McKusick KA, Strauss HW, Buckley MJ: Left ventricular function during intraaortic balloon pumping assessed by multigated cardiac blood pool imaging. Circulation 1978; 59 (1):176-183.
52. Menon M, Menon S, Strauss HW, Catalona WJ: Demonstration of the existence of canine prostatic lymphatics by radioisotope techniques. J Urol 1977; 118:274-277.
53. Bailey IK, Come PC, Kelly DT, Burrow RD, Griffith LSC, Strauss HW, Pitt B: Thallium-201 myocardial perfusion imaging in aortic valve stenosis. Am J Card 1977; 40:889-899.
54. Oster AM, Strauss HW, Harrison K, Burns HD, Pitt B: Thallium-201 distribution in the thyroid: Relationship to thyroïdal trapping function. Radiology 1978; 126:733-734.
55. Nichols AB, Cochavi S, Hales C, Strauss HW, McKusick KA, Waltman A, Beller GA: Scintigraphic detection of pulmonary emboli by serial positron imaging of inhaled 15-O-labeled carbon dioxide. N Engl J Med 1978; 299:279-284.
56. Barth KH, Alderson PC, Strandberg JD, Strauss HW, White RI: 99mTc-pyrophosphate imaging in experimental mesenteric infarction: Relationship of tracer uptake to the degree of ischemic injury. Radiology 1978; 129:491-495.
57. Lo HH, McKusick KA, Strauss HW: Gastric distention simulating a left subphrenic abscess. J Nucl Med 1978; 19:438-439.
58. Nichols AB, McKusick KA, Strauss HW, Dinsmore RE, Block PC, Pohost GM: Clinical utility of gated cardiac blood pool imaging in congestive left heart failure. Am J Med 1978; 65:785-793.
59. Kadir S, Strauss HW: Evaluation of inflammatory bowel disease with technetium-99m DTPA. Radiology 1979; 130:443-446.
60. Konstam MA, Levine BW, Strauss HW, McKusick KA: Left superior vena cava to left atrial communication diagnosed with radionuclide angiocardiology and with differential right to left shunting. Am J Card 1979; 43:149-153.
61. Ritchie JL, Zaret DL, Strauss HW, Pitt B, Berman DS, Schelbert HR, Ashburn WL, Berger HJ and Hamilton GW: Myocardial imaging with thallium-201: A multicenter study in patients with angina pectoria or acute myocardial infarction. Am J Card 1978; 42:345-350.

62. Khaw BA, Gold HK, Leinbach RC, Fallon JT, Strauss HW, Pohost GM, Haber E: Early imaging of experimental myocardial infarction by intracoronary administration of ¹³¹I-labeled anticardiac myosin (Fab') fragments. Circulation 1978; 58:1137-1142.

63. Nichols AB, Cochavi S, Hales CA, Beller GA, Strauss HW: Resolution rates of pulmonary embolism assessed by serial positron imaging of inhaled ¹⁵⁰-labeled carbon dioxide. J Nucl Med 1979; 20:281-286.

64. Konstam MA, Strauss HW, Alpert NA, Miller SW, Murphy RX, Greene RE, McKusick KA: Noninvasive estimation of pulmonary arterial pressure by analysis of pulmonary blood flow distribution. J Nucl Med 1979; 20:923-937.

65. Boucher CA, Strauss HW, Okada RD, Kirshenbaum HD, Kushner FG, McKusick KA, Block PC, Leask JW and Pohost GM: The bifocal diverging collimator: A means of simultaneous biplane imaging of the heart during equilibrium radionuclide ventriculography. J Nucl Med 1980; 21:71-76.

66. Laver MB, Strauss HW, Pohost GM: Herbert Shubin Memorial Lecture. Right and left ventricular geometry: Adjustments during acute respiratory failure. Crit Care Med 1979; 7(12):509-519.

67. Okada R, Pohost GM, Kirshenbaum H, Kushner F, Boucher CA, Block PC and Strauss HW: Radionuclide determined change in pulmonary blood volume with exercise, improved sensitivity of multigated blood pool scanning in detecting coronary artery disease. New Engl J Med 1979; 301:569-576.

68. Castronovo FP, McKusick KA, Toombs BD, Callahan RJ, Strauss HW: Dosimetric considerations of bladder wall dose following the administration of Tc-99m microspheres. Health Physics 1980; 39:112-113.

69. Gewirtz H, Grotte CJ, Strauss HW, O'Keefe DD, Akins CW, Daggett WM, Pohost GM: The influence of left ventricular volume and wall motion on myocardial images. Circulation 1979; 59:1172-1177.

70. Gewirtz H, Beller GA, Strauss HW, Dinsmore RE, Zir LM, McKusick KA, Pohost GM: Transient defects of resting thallium scan in patients with coronary artery disease. Circulation 1979; 59:707-713.

71. Toombs BD, McKusick KA, Castronovo FP, Callahan RJ, Strauss HW: Urinary excretion of technetium-99m following administration of Tc-99m microspheres. Radiology 1980; 134:489-491.

72. Winzelberg GG, McKusick KA, Strauss HW, Waltman AC and Greenfield AJ: Evaluation of gastrointestinal bleeding by red blood cells labeled in vivo with technetium-99m. J Nucl Med 1979; 20:1080-1086.

73. Cochavi S, Pohost GM, Elmaleh DR and Strauss HW: Transverse-sectional imaging with NaI8F in myocardial. J Nucl Med 1979; 20:1013-1017.

74. Winzelberg GG, Castronovo FP, Callahan RJ, McKusick KA, Strauss HW: In-oxine labeled red cells for detection of simulated lower gastrointestinal bleeding in an animal model. Radiology 1980; 135:455-461.

75. Goldman MR, Boucher CA, Block PC, Buckley MJ, Austen WG, Strauss HW, Pohost GM: Spectrum of congestive heart failure late after aortic valve or mitral replacement: Differentiation of valvular versus myocardial cause by radionuclide ventriculogram-ejection fraction. Am Heart J, 102:751-756, 1981.

76. Elmaleh DR, Hnatowitch DJ, Cochavi S, McKusick KA, Brownell GL, Strauss HW: Emission tomographic images of the skull with fluorine-18. Int J Nucl Med and Biology. 1980; 7:289-293.

77. Okada RD, Pohost GM, Nichols AB, McKusick KA, Strauss HW, Boucher CA, Block PC, Rosenthal SV, Dinsmore RE: Left ventricular regional wall motion assessment by multigated and end-systolic, end-diastolic gated cardiac left ventriculography. Am J Card, 1980; 45:1211-1218.

78. Homcy CJ, Strauss HW, Kopiwoda S: Beta receptor occupancy: Its assessment in the intact animal. J Clin Invest. 1980; 65:1111-1118.

79. Winzelberg GG, Miller SW, Okada RD, Boucher CA, McKusick KA, Pohost GM, Strauss HW: Scintigraphic assessment of false left ventricular aneurysms. Am J Rad 1980; 135:569-574.

80. Okada RD, Boucher C, Kirshenbaum H, Kushner FG, Strauss HW, Block PC, McKusick KA, Pohost G: Improved diagnostic accuracy of thallium-201 stress test using multiple observers and criteria derived from interobserver analysis of variance. Am J Card 1980; 46:619-624.

81. Khaw BA, Fallon JT, Strauss HW, Haber E: Myocardial infarct imaging of antibodies to canine cardiac myosin with indium-111 diethylenetriamine pentaacetic acid. Science, 1980; 209:295-297.

82. Winzelberg GG, Boucher CA, Pohost GM, McKusick KA, Bingham JB, Strauss HW: Right ventricular function in aortic and mitral valve disease: Relation of gated first pass radionuclide angiography to clinical and hemodynamic findings. Chest, 1981; 79:520-528.

83. Nichols AB, Strauss HW, Moore RH, Guiney TE, Cochavi S, Beller GA and Pohost GA: Acute changes in cardiopulmonary blood volume during upright exercise stress testing in patients with coronary artery disease. *Circulation* 1979, 60:520-523.

84. Lorell B, Boucher CA, Friedlich AL, Strauss HW: Regional differences in pulmonary vascular resistance in the same patient: A study of partial anomalous pulmonary venous return, intact atrial septum, and mitral stenosis before and after surgical correction. *Ann Int Med*. 1980, 93:437-440.

85. Okada RD, Kushner FG, Kirshenbaum FG, Strauss HW, Dinsmore RE, Newell JB, Boucher CA, Block PC, Pohost GM: Observer variance in the qualitative evaluation of left ventricular wall motion and quantitation of left ventricular ejection fraction using rest and exercise multigated blood pool imaging. *Circulation* 1980; 61:128-136.

86. Pohost GM, Okada RD, O'Keefe D, Gerwirtz H, Beller GA, Strauss HW, Chaffin JS, Leppo J, and Daggett WM: Thallium redistribution in dogs with severe coronary artery stenosis of fixed caliber. *Circ Res* 1981; 48:439-446.

87. Pitt B, Strauss HW and Thrall JH: Use of myocardial imaging in the evaluation of patients with cardiovascular disease. *Prog Nucl Med* 1980; 6:210-222.

88. Callahan RJ and Strauss HW: Labeling human albumin microspheres with radiomercury. *Int J Nucl Med* 1980; 7:65-67.

89. Boucher CA, Zir LM, Beller GA, Okada RD, McKusick KA, Strauss HW, and Pohost GM: Increased lung uptake of thallium-201 during exercise myocardial imaging: Clinical, hemodynamic and angiographic implications in patients with coronary artery disease. *Am J Card* 1980; 46:189-196.

90. Strauss HW, McKusick KA, Bingham JB: Cardiac nuclear imaging: Principles, instrumentation and pitfalls. *Am J Card* 1980; 46:1109-1116.

91. Winzelberg GG, Strauss HW, Bingham JB, McKusick KA: Scintigraphic evaluation of left ventricular aneurysm. *Am J Card* 1980; 46:1138-1143.

92. Okada RD, Boucher CA, Strauss HW, Pohost GM: Exercise radionuclide imaging approaches to coronary artery disease. *Am J Card* 1980; 46:1188-1204.

93. DeBoer LWV, Strauss HW, Kloner RA, Rude RE, David RF, Maroko PR, Braunwald E.: An autoradiographic method for measuring the ischemic myocardium at risk: The effects of verapamil on infarct size following experimental coronary artery occlusion. *Proc Natl Acad Sci* 1980; 77:6119-6123.

94. Okada RD, Jacobs M, Daggett WM, Leppo J, Strauss HW, Moore R, Newell JB, O'Keefe D, Boucher CA, Pohost GM: Thallium-201 kinetics in nonischemic canine myocardium. *Circulation*, 1982; 65:70-76.
95. Winzelberg GG, Rapoport F, Boucher CA, Carey RW, McKusick KA, Strauss HW: Combined gated cardiac blood pool scintigraphy and gallium-67 citrate scintigraphy for detection of cardiac lymphoproliferative disorders. *Radiology* 1981; 141:191-192.
96. Elmaleh DR, Knapp FF, Yasuda T, Coffey JL, Kopiwoda S, Okada R, Strauss HW: Myocardial imaging with ^{123}mTe -9-Telluraheptaedeconic acid. *J Nucl Med* 1981; 22:994-999.
97. Brown KA, Osbakken M, Boucher CA, Strauss HW, Pohost GM, Okada RD: Positive exercise thallium-201 test responses in patients with less than 50% maximal coronary stenosis: Angiographic and clinical predictors. *Am J Cardiol* 1985; 55:54-57.
98. Bingham JB, McKusick KA, Strauss HW, Boucher CA, Pohost GM: Influence of coronary artery disease on pulmonary uptake of thallium-201. *Am J Cardiol* 1980; 46:821-826.
99. Winzelberg GG, Froelich JW, McKusick KA, Waltman AC, Greenfield AJ, Athanasoulis CA, Strauss HW: Radionuclide detection and localization of bleeding in patients with suspected lower gastrointestinal hemorrhage. *Radiology* 1981; 139:465.
100. Lazewatsky JL, Alpert NM, Moore RH, Boucher CA, Strauss HW, Entine G, Chaney R and Schreiner R: A CdTe ambulatory ventricular function monitor. *IEEE Transaction on Nuclear Science* 1980; NS-27(1):524-528.
101. Kushner FG, Okada RD, Kirshenbaum HD, Boucher CA, Strauss HW, Pohost GM: Lung thallium-201 uptake following stress testing in patients with coronary artery disease. *Circulation* 1981; 63:341-347.
102. Liberthson RR, Boucher CA, Strauss HW, Dinsmore RE, McKusick KA, Pohost GM: Right ventricular function in adult atrial septal defects: Preoperative and postoperative assessment and clinical implications. *Am J Cardiol* 1981; 47:56-60.
103. Boucher CA, Bingham JB, Osbakken MD, Okada RD, Strauss HW, Block PC, Levine FH, Phillips HR, Pohost GM: Early changes in left ventricular size and function following correction of left ventricular volume overload. *Am J Cardiol* 1981; 47:991-1004.
104. Kirshenbaum HD, Okada RD, Boucher CA, Kushner FG, Strauss HW, Pohost GM: Relationship of thallium-201 myocardial perfusion pattern to regional and global left ventricular function with exercise. *Am Heart J* 1981; 101:734-739.

105. Okada RD, Osbakken MD, Boucher CA, Strauss HW, Block PC, Pohost GM: Pulmonary blood volume ratio response to exercise: A noninvasive determination of exercise-induced changes in pulmonary capillary wedge pressure. Circulation 1982; 65:70-76.

106. Okada RD, Knapp FF, Elmaleh DR, Yasuda T, Boucher CA, Strauss HW: Tellurium-123m-labeled-9-telluraheptadecanoic acid: A possible cardiac imaging agent. Circulation 65:305-310, 1982.

107. McKusick KA, Froelich JW, Winzelberg GG, Strauss HW: 99mTc red blood cells for detection of gastrointestinal bleeding: Experience with 80 patients. Am J Roent 1981; 137:1113-1118.

108. Urbina A, Okada RD, Palacios I, Osbakken M, Strauss HW: Pulmonary capillary wedge pressure, as inferred from lung areas in gated blood-pool scintigrams: Concise Communication. J Nucl Med 1981; 22:950-954.

109. Lee DC, Johnson RA, Bingham JB, Leahy M, Dinsmore RE, Goroll AH, Newell JB, Strauss HW and Haber E: Heart failure in outpatients: A randomized trial of digoxin versus placebo. NEJM 1982; 306(12):699-705.

110. Winzelberg GG, McKusick KA, Froelich JW, Callahan RJ and Strauss HW: Detection of gastrointestinal bleeding with 99mTc-labeled red blood cells. Sem Nucl Med 1982; XII(2):139-146.

111. Castronovo FP, Strauss HW, McKusick KA and Potsaid MS: Iodine-125 labeled phenylphosphonic acid: A new radiopharmaceutical for long-term investigations of the skeleton. Skeletal Radiology 1982; 7:233-237.

112. Boucher CA, Pohost GM, Okada RD, Levine FH, Strauss HW and Harthorne JW: The effect of ventricular pacing on left ventricular function. Am Heart J 1983; 106:1105-1111.

113. Jacobs ML, Okada RD, Daggett WM, Fowler BN, Strauss HW, Geffin G, and Pohost GM: Regional myocardial radiotracer kinetics in dogs using miniature radiation detectors. Am Physiol Soc 1982; H849-H854.

114. Liberthson RR, Zaman L, Weyman A, Kiger R, Dinsmore RE, Leinbach RC, Strauss HW, Buckley MJ: Aberrant origin of the left coronary artery from the proximal right coronary artery: Diagnostic features and pre- and postoperative course. Clin Cardiol 1982; 5:377-381.

115. Osbakken MD, Boucher CA, Okada RD, Bingham JB, Strauss HW, Pohost GM: The spectrum of global left ventricular responses to supine exercise: Limitation in the use of ejection fraction in identifying patients with coronary artery disease. Am J Cardiol 1983; 51:28-35.

116. Leppo J, Boucher CA, Okada RD, Newell JB, Strauss HW, Pohost GM: Serial thallium-201 imaging following dipyridamole infusion: Diagnostic utility in detecting coronary stenoses and relationship to regional wall motion. *Circulation* 1982; 66:649-657.

117. Brown KA, Boucher CA, Okada RD, Strauss HW, Pohost GM: Initial and delayed right ventricular thallium-201 rest-imaging following dipyridamole-induced coronary vasodilation: Relationship to right coronary artery pathoanatomy. *Am Heart J* 1982; 103:1019-1024.

118. Froelich JW, McKusick KA, Strauss HW, Bingham JB, Kopans DB, DeLuca SA: Localization of bone lesions for open biopsy. *Radiology* 1982; 146:549-550.

119. Livni E, Elmaleh DR, Levy S, Brownell GL, Strauss HW: Beta-methyl (1- 11C) heptadecanoic Acid: A new myocardial metabolic tracer for positron emission tomography. *J Nucl Med* 1982; 23:169-175.

120. Moore RH, Alpert NM, Strauss HW: A variable angle slant hole (VASH) collimator. *J Nucl Med* 1983; 24:61-65.

121. Osbakken MD, Kopiwoda SY, Swan A, Castronovo FP and Strauss HW: Cardiac lymphoscintigraphy following closed-chest catheter injection of radiolabeled colloid into the myocardium of dogs: Concise Communication. *J Nucl Med* 1982; 23:883-889.

122. Finklestein S, Miller A, Callahan RJ, Fallon JT, Godley F, Feldman BL, Hinton RC, Roberts AB, Strauss HW, Lees RS: Imaging of acute arterial injury with 111In-labeled platelets: A comparison with scanning electron micrographs. *Radiology* 1982; 145:155-159.

123. Brown KA, Boucher CA, Okada RD, Strauss HW, McKusick KA, Pohost GM: Serial right ventricular thallium-201 imaging after exercise: Relation to anatomy of the right coronary artery. *Am J Cardiol* 1982; 50:1217-1222.

124. Svensson SE, Lomby M, Olsson L, Persson S, Strauss HW, Westling H: Non-invasive determination of the distribution of cardiac output in man at rest and during exercise. *Clinical Physiology* 1982; 2:467-477.

125. Wilson RA, Okada RD, Boucher CA, Strauss HW, Pohost GM: Radionuclide-determined changes in pulmonary blood volume and thallium lung uptake in patients with coronary artery disease. *Am J Cardiol* 1983; 51:741-748.

126. Correia JA, Bucelewicz WH, Strauss HW, Alpert NM, Brownell GL, Taveras JM: Transportation of short-lived positron emitters from a medical cyclotron to a remote imaging suite. *Medical Physics* 1983; 10(2):228-231.

127. Wilson RA, Sullivan PJ, Moore RA, Zieleska JS, Alpert NM, Boucher CA, McKusick KA and Strauss HW: An ambulatory ventricular function monitor: Validation and preliminary clinical results. Am J Cardiol 1983; 52:601-606.

128. Brown KA, Okada RD, Boucher CA, Rothendler J, Strauss HW and Pohost GM: Exercise-induced changes in hepatic blood volume measured during routine cardiac equilibrium cineangiography: Relationship to coronary anatomy and right ventricular function. J Am Coll Cardiol 1983; 2(3):514-521.

129. Wilson RA, Okada RD, Strauss HW and Pohost: Effect of glucose-insulin-potassium infusion on thallium clearance. Circulation 1983; 68(1):203-209.

130. Cambria RP, Megerman J, L'Italien G, Warnock D, Strauss HW, Abbott WM: The effect of halothane anesthesia on platelet aggregation in vivo: Decreased deposition on polytetrafluoroethylene arterial grafts in dogs. Surgery 1983; 93(6):752-757.

131. Khaw BA, Strauss HW, Pohost GM, Fallon JT, Katus HA, Haber E: Relation of immediate and delayed thallium-201 distribution to localization of iodine-125 antimyosin antibody in acute experimental myocardial infarction. Am J Cardiol 1983; 51:1428-1432.

132. Ohsuzu F, Boucher CA, Newell JB, Yasuda T, Gold HK, Leinbach RC, McKusick KA, Okada RD, Rosenthal S, Pohost GM, Strauss HW: Relation of segmental wall motion to global left ventricular function in acute myocardial infarction. Am J Cardiol 1983; 51:1275-1281.

133. Brown KA, Okada RD, Boucher CA, Phillips HR, Strauss HW, Pohost GM: Serial thallium-201 imaging at rest in patients with unstable and stable angina pectoris: Relationship of myocardial perfusion at rest to presenting clinical syndrome. Am Heart J 1983; 106(1):70-77.

134. Brown KA, Boucher CA, Okada RD, Guiney TE, Newell JB, Strauss HW, Pohost GM: Prognostic value of exercise thallium-201 imaging in patients presenting for evaluation of chest pain. J Am Coll Cardiol 1983; 1(4):994-1001.

135. Wilson R, McKusick K, Strauss H: Cardiovascular nuclear medicine current applications and the outlook for 1985. Europ J Radiol 1983; (3):264-267.

136. Okada RD, Elmaleh D, Werre GS, Strauss HW: Myocardial kinetics of 123I-labeled-16-hexadecanoic acid. Eur J Nucl Med 1983; (8):211-217.

137. Lees RS, Lees AM, Strauss HW: External imaging of human atherosclerosis. J Nucl Med 1983; (24): 154-156.
138. Geller E, Khaw BA, Strauss HW, Carvalho AC, Rajagopalan B, Jones R, Zapol WM: 99mTechnetium-fibrinogen lung scanning in canine lung contusion. J Trauma 1984; 24:611-618.
139. Boucher CA, Wilson RA, Kanarek DJ, Hutter AM, Okada RD, Liberthson RR, Strauss HW and Pohost GM: Exercise testing in asymptomatic or minimally symptomatic aortic regurgitation: Relationship of left ventricular ejection fraction in left ventricular filling pressure during exercise. Circulation 1983; 67:1091-1100.
140. Boucher CA, Kanarek DJ, Okada RD, Hutter AM, Strauss HW and Pohost GM: Exercise testing in aortic regurgitation: Comparison of radionuclide left ventricular ejection fraction with exercise performance at the anaerobic threshold and peak exercise. Am J Cardiol 1983; 52:801-808.
141. Callahan RJ, Froelich JW, McKusick KA, Leppo J and Strauss HW: A modified method for the in vivo labeling of red blood cells with Tc-99m: Concise Communication. J Nucl Med 23:315-318, 1982.
142. Elmaleh DR, Livni E, Levy S, Varnum D, Strauss HW and Brownell GL: Comparison of 1-14C and 1-14C-labeled fatty acids and their beta-methyl analogs. Int J Nucl Med 1983; 10(4):181-187.
143. Rothendler JA, Okada RD, Strauss HW, Chesler DA, Pohost GM: Evaluation of an animal model of a new double-dose tracer imaging technique for assessing changes in myocardial perfusion. J Nucl Med 1984; 25(6):706-713.
144. Goodman MM, Knapp FF, Jr., Elmaleh DR, Strauss HW: New myocardial imaging agents: Synthesis of 15-(p-Iodophenyl)-3(R,S)-methylpentadecanoic acid by decomposition of a 3,3-(1,5-Pentanediy1) triazene precursor. J Org Chem 1984; 49:2322-2325.
145. Froelich JW, Simeone JF, McKusick KA, Winzelberg GG, Strauss HW: Radionuclide imaging and ultrasound in liver/spleen trauma. Radiology 1982; 145:457-461.
146. Elmaleh DR, Zamecnik PC, Castronovo FP, Strauss HW and Rapaport E: 99mTc-labeled nucleotides as tumor-seeking radiodiagnostic agents. Proc Natl Acad Sci 1984; 81:918-921.
147. Brown KA, Boucher CA, Okada RD, Strauss HW and Pohost GM: Quantification of pulmonary thallium-201 activity following upright exercise in normal subjects: Importance of peak heart rate and propranolol usage in defining normal values. Am J Cardiol 1984; 53:1678-1682.

148. Khaw BA, Mattis JA, Melincoff G, Strauss HW, Gold HK, Haber E: Monoclonal antibody to cardiac myosin: Imaging of experimental myocardial infarction. *Hybridoma* 1984; 3:11-23.

149. Brown KA, Okada RD, Boucher CA, Strauss HW, Pohost GM: Right ventricular ejection fraction response to exercise in patients with coronary artery disease: Influence of both right coronary artery disease and exercise-induced changes in right ventricular afterload. *J Am Coll of Cardiol* 1984; 3:895-901.

150. Rabinowitz RA, McKusick KA, Strauss HW: 99mTc red blood cell scintigraphy in evaluating focal liver lesions. *Am J Roentgenol* 1984; 143:63-68.

151. Pozen MW, Lerner DJ, D'Agostino RB, Strauss HW, Gertman PM: Cardiac nuclear imaging: Adoption of an evolving technology. *Medical Care* 1984; 22:343-348.

152. Kearfott KJ, Elmaleh DR, Goodman M, Correia JA, Alpert NM, Ackerman RH, Brownell GL, Strauss HW: Comparison of 2- and 3-18F-Fluoro-deoxy-D-glucose for studies of tissue metabolism. *Int J Nucl Med Biol* 1984; 11:15-22, 1984.

153. Castronovo FP, Yasuda T, Strauss HW: (99mTc) Pyrophosphate and (I-125) Phenylphosphate behavior in the infarcted rat myocardium. *In J Nucl Med Biol* 1984; 11:55-59.

154. Sullivan PJ, Werre J, Elmaleh DR, Okada RD, Kopiwoda SY, Castronovo FP, McKusick KA, Strauss HW: A comparison of the technetium-labeled myocardial agents DiArs and DMPE to ^{201}Tl in experimental animals. *Int J Nucl Med Biol* 1984; 11(1):3-10.

155. Kaul S, Boucher CA, Okada RD, Newell JB, Strauss HW, Pohost GM: Sources of variability in the radionuclide angiographic assessment of ejection fraction: A comparison of first-pass and gated equilibrium techniques. *Am J Cardiol* 1984; 53:823-828.

156. Ohsuzu F, Strauss HW and Homcy CJ: The lung beta-receptor in the spontaneous hypertensive rat. *Jpn Circulation J* 1984; 48:1203-1209.

157. Pile-Spellman JM, McKusick KA, Strauss HW, Cooney J, Taveras JM: Experimental in vivo imaging of the cranial perineural lymphatic pathway. *Am J Neuro Radiol* 1984; 5:539-545.

158. Harris WH, McKusick KA, Athanasoulis CA, Waltman AC, Strauss HW: Detection of pulmonary emboli after total hip replacement using serial $^{99\text{m}}\text{Tc}$ 201 pulmonary scans. *J Bone Joint Surg* 1984; 66A(9):1388-1392.

159. Okada RD, Knapp FF, Goodman MM, Elmaleh DR, Strauss HW: Tellurium labelled fatty acid analogs: Relationship of heteroatom

position on myocardial kinetics. Eur J Nucl Med 1985; 11:156-161.

160. Megerman J, Christenson JT, Hanel KC, Strauss HW, Abbott WM: Imaging vascular grafts in vivo with indium-111-labeled platelets. Ann Surg 1983; 198:178-184.

161. Roberts AB, Lees AM, Lees RS, Strauss HW, Fallon JT, Taveras J, Kopiwoda S: Selective accumulation of low density lipoproteins in damaged arterial wall. J Lipid Res 1983; 24:1160-1167.

162. Froelich JW, McKusick KA, Strauss HW, Bingham JB, Kopans DB, DeLuca SA: Localization of bone lesions for open biopsy. Radiology 1983; 146:549-550.

163. Kizuka H, Elmaleh DR, Brownell GL, Strauss HW, Hanson RN: Synthesis and evaluation of p-iodo-phentermine (IP) as a brain perfusion imaging agent. Nucl Med Communication 1985; 6:49-56.

164. Rothendler JA, Okada RD, Wilson RA, Brown KJ, Foucher CA, Strauss HW, Pohost GM: Effect of a delay in commencing imaging on the ability to detect transient thallium defects. J Nucl Med 1985; 26:880-883.

165. Kaul S, Okada RD, Pandian NG, Pohost GM, Weyman AE, Strauss HW: Determination of left ventricular "area at risk" with high-resolution single photon emission computerized tomography in experimental coronary occlusion. Am Heart J 1985; 109:1369-1374.

166. Carlson RI, Ben-Porath E, Shouval D, Strauss W, Isselbacher KJ, Wands JR: Antigenic characterization of human hepatocellular carcinoma. J Clin Invest 1985; 76:40-51.

167. Elmaleh DR, Livni E, Okada R, Needham FL, Schleuederberg J, Strauss HW: The synthesis and evaluation of radioiodinated 14-(iodophenyl)-3-(R,S)methyltetradecanoic acid. Nucl Med Comm 1985; 6:287-297.

168. Brewster DC, Okada RD, Strauss HW, Abbott WM, Darling RC and Boucher CA: Selection of patients for preoperative coronary angiography: Use of dipyridamole-stress-thallium myocardial imaging. J Vasc Surg 1985; 2:504-510.

169. Castronovo FP, McKusick KA, Dann J, Prout GR, Strauss HW: A simplified technique for quantifying 24-h whole body retention of ^{99m}Tc-labeled methylene diphosphonate (MDP). Int J Nucl Med Biol 1985; 12:209-214.

170. Liu P, Kiess M, Okada RD, Strauss HW, Block PC, Pohost GM, Boucher CA: Increased thallium lung uptake after exercise in isolated left anterior descending coronary artery disease. Am J Cardiol 1985; 55:1469-1473.

171. Bingham J, Okada RD, McKusick K, Boucher C, Tarolli E, Alpert N and Strauss H: Comparison of three semiautomatic methods for determination of left ventricular ejection fraction from gated cardiac blood pool images. Eur J Nucl Med 1985; 10:494-499.

172. Greenberg JM, Murphy JH, Okada RD, Pohost GM, Strauss HW, Boucher CA: Value and limitations of radionuclide angiography in determining the cause of reduced left ventricular ejection fraction: Comparison of idiopathic dilated cardiomyopathy and coronary artery disease. Am J Cardiol 1985; 55:541-544.

173. Parker JA, Strauss HW: The effect of exercise on the total water space and red blood cell volume of the gracilis muscle of the dog. Int J Nucl Med Biol 1985; 12(4):255-259.

174. Liu P, Kiess MC, Okada RD, Block PC, Strauss HW, Pohost GM, and Boucher CA: The persistent defect on exercise thallium imaging and its fate after myocardial revascularization: Does it represent scar or ischemia? Am Heart J 1985; 110(5):996-1001.

175. Brown KA, Boucher CA, Okada RD, Newell J, Strauss HW, Pohost GM: Prognostic significance of regional myocardial ischemia of the ventricular septum assessed by thallium-201 exercise testing. Am J Cardiol 1986; 58:359-360.

176. Kaul S, Chesler DA, Pohost GM, Strauss HW, Okada RD, Boucher CA: Influence of peak exercise heart rate on normal thallium-201 myocardial clearance. J Nucl Med 1986; 27:26-30.

177. Wiske PS, Palacios I, Block PC, O'Gara P, Strauss HW, Okada RD, Boucher CA: Assessment of regional myocardial perfusion with thallium imaging during transient left anterior descending coronary occlusion during angioplasty. Am J Cardiol 1986; 57:1083-1087.

178. Rothendler JA, Boucher CA, Strauss HW, Pohost GM, Okada RD: Decrease in the ability to detect elevated lung thallium due to delay in commencing imaging after exercise. Am Heart J 1985; 110:830-835.

179. Kaul S, Boucher CA, Newell JB, Chesler DA, Greenberg JM, Okada RD, Strauss HW, Dinsmore RE, Pohost GM: Determination of the quantitative thallium imaging parameters that optimize detection of coronary artery disease. J Am Coll Cardiol 1986; 7:527-537.

180. Katus HA, Yasuda S, Gold HK, Leinb RC, Strauss HW, Waksmonski C, Haber E, Khaw BA: Diagnosis of acute myocardial infarction: Detection of circulating cardiac myosin light chains. Am J Cardiol 1984; 25:592-603.

181. Okada RD, Lepp JA, Strauss HW, Boucher CA, Pohost GM: Mechanisms and time course for the disappearance of thallium-201 defects at rest in dogs. Am J Cardiol 1982; 49:699-706.

182. Khaw BA, Strauss HW, Cahill SL, Soule HR, Edgington TS, Cooney JM. Sequential imaging of Indium-111 labeled monoclonal antibody in human mammary tumors hosted in nude mice. J Nucl Med 1984; 25:592-603.

183. Osbakken MD, Okada RD, Boucher CA, Strauss HW, Pohost GM: Comparison of exercise perfusion and ventricular function imaging: An analysis of factors affecting the diagnostic accuracy of each technique. J Am Coll Cardiol 1984; 3:272-283.

184. Boucher CA, Brewster DC, Darling RC, Okada RD, Strauss HW, Pohost GM: Determination of cardiac risk by dipyridamole-thallium imaging before peripheral vascular surgery. New Engl J Med 1985; 312:389-394.

185. Yonekura Y, Brill AB, Som P, Yamamoto K, Srivastava SC, Iwai J, Elmaleh DR, Livni E, Strauss HW, Goodman MM, Knapp FF: Regional myocardial substrate uptake in hypertensive rats: A quantitative autoradiographic measurement. Science 1985; 227:1494-1496.

186. Livni E, Elmaleh DR, Darlai-Kovach M, Goodman MM, Knapp FF, and Strauss HW: Radiolabeled beta-methyl phenyl fatty acids as potential tracers for myocardial imaging and metabolism. Europ Heart J 1985; 6:85-89.

187. Brown KA, Osbakken M, Boucher CA, Strauss HW, Pohost GM, Okada RD: Positive exercise thallium-201 test responses in patients with less than 50% maximal coronary stenosis: Angiographic and clinical predictors. Am J Cardiol 1985; 55:54-57.

188. Kamm R, Butcher R, Froelich J, Johnson M, Salzman E, Shapiro A and Strauss HW: Optimisation of parameters of external pneumatic compression for prophylaxis against deep vein thrombosis: Radionuclide gated imaging studies. Cardiovasc Res 1986; XX(8):588-596.

189. Wilson RA, Sullivan PJ, Okada RD, Boucher CA, Morris C, Pohost GM: The effect of eating on thallium myocardial imaging. Chest 1986; 89:195-198.

190. Homma S, Callahan RJ, Ameer B, McKusick KA, Strauss HW, Okada RD, Boucher CA: Usefulness of oral dipyridamole suspension for stress thallium imaging without exercise in the detection of coronary artery disease. *Am J Cardiol* 1986; 57:503-508.

191. Croft CH, Rude RE, Gustafson N, Stone PH, Poole WK, Roberts R, Strauss HW, Raabe DS, Thomas LJ, Jaffe AS, Muller J, Hoagland P, Sobel BE, Passamani ER, Braunwald E, Willerson JT and the MILIS Study Group: Abrupt withdrawal of β -blockade therapy in patients with myocardial infarction: Effects on infarct size, left ventricular function, and hospital course. *Circulation* 1986; 73(6):1281-1290.

192. Khaw BA, Cooney J, Edgington T, Strauss HW: Differences in Experimental tumor localization of dual-labeled monoclonal antibody. *J Nucl Med* 1986; 27:1293-1299.

193. Homma S, Culliland Y, Guiney TE, Strauss HW, Boucher CA. Safety of intravenous dipyridamole for stress testing with thallium imaging. *Am J Cardiol* 1987; 59:152-154.

194. Young DZ, Guiney TE, McKusick KA, Okada RD, Strauss HW, Boucher CA: Unmasked potential myocardial ischemia with dipyridamole thallium imaging in patients with normal submaximal exercise thallium tests. *Am J Noninvasive Cardiol* 1987; 1:11-14.

195. Gill JB, Moore RH, Tamaki N, Miller DD, Barlai-Kovach M, Yasuda T, Boucher CA, Strauss HW: Multigated blood pool tomography: A new method for the assessment of left ventricular function. *J Nucl Med* 1986; 27:1916-1924.

196. Ruddy TD, Yasuda T, Gold HK, Leinbach RC, McKusick KA, Boucher CA, Strauss HW: Correlations of regional wall motion and myocardial perfusion in patients with and without anterior precordial ST segment depression during acute inferior myocardial infarction. *Am J Noninvasive Cardiol* 1987; 1:81-87.

197. Ruddy TD, Yasuda T, Gold HK, Leinbach RC, Newell JB, McKusick KA, Boucher CA, Strauss HW: Anterior ST segment depression in acute inferior myocardial infarction as a marker of greater inferior apical and posterolateral damage. *Am Heart J* (1986; 112(6):1210-1216.

198. Rothendler JA, Okada RD, Wilson RA, Brown KA, Boucher CA, Strauss HW, Pohost GM: Effect of a delay in commencing imaging on the ability to detect transient thallium defects. *J Nucl Med* 1985; 26:880-883.

199. Castronovo FP, Yasuda T, Strauss HW: Acute uptake and chronic retention of infarct avid myocardial-seeking agents: ^{99m}Tc -pyrophosphate and ^{125}I -phenylphosphate. *Nucl Med Commun* 1984; 5:647-654.

200. Castronovo FP, McKusick KA, Strauss HW: The 4-hour/24-hour Tc-99m-MDP whole body retention: A new index of bone pathology. Int J Nucl Med Biol, 1986; 13:599-602.

201. Wheelan K, Mukharji J, Rude RE, Poole WK, Gustafson N, Thomas LJ, Strauss HW, Jaffe AS, Muller JE, Roberts R, Croft CH, Passamani ER, Willerson JT, MILIS Study Group. Am J Cardiol 1986; 57:745-750.

202. Bianco JA, Elmaleh DR, Leppo JA, King MA, Moring A, Livni E, Espinoza E, Alpert JS, Strauss HW: Effect of glucose and insulin infusion on the myocardial extraction of a radiolabeled methyl-substituted fatty acid. Eur J Nucl Med 1986; 12:120-124.

203. Yamamoto K, Som P, Brill AB, Yonekura Y, Srivastava SC, Meinken GE, Iwai J, Goodman MM, Knapp FF, Elmaleh DR, Livni E, and Strauss HW: Dual tracer autoradiographic study of B-methyl-(1-14C) heptadecanoic acid and 15-p-(131I)-Iodophenyl-8-methylpentadecanoic acid in normotensive and hypertensive rats. J Nucl Med 1986; 27:1170-1173.

204. Nishimura T, Yasuda T, Gold HK, Leinbach RC, McKusick KA, Strauss HW: Left and right ventricular function after streptokinase reperfusion: Assessment by gated blood pool scan. Nucl Med Comm 1987; 8:87-97.

205. Nishimura T, Yasuda T, Gold HK, Leinbach RC, Boucher CA, McKusick KA, Strauss HW: Contribution of contractile state of the non-infarcted area of global ventricular performance after acute myocardial infarction: Assessment by quantitative radionuclide angiography. Radiation Medicine 1986; 4(4):127-133.

206. Dann J, Castronovo FP, McKusick KA, Griffin PP, Strauss HW, Proulx GR: Total bone uptake in management of metastatic carcinoma of the prostate. J Urol 1987; 137:444-448.

207. Lee DC, Johnson RA, Bingham JB, Leahy M, Dinsmore RE, Goroll AH, Newell JB, Strauss HW, Haber E: Heart failure in outpatients: A randomized trial of digoxin versus placebo. N Engl J Med 1986; 306(12):699-705.

208. Mukharji J, Rude RE, Poole K, Gustafson N, Thomas LJ, Strauss HW, Jaffe AS, Muller JE, Roberts R, Raabe SD, Croft CH, Passamani E, Braunwald E, Willerson JT and the MILIS Study Group: Risk factors for sudden death following acute myocardial infarction: (Two-year follow-up). Am J Cardiol 1984; 54:31-36.

209. Quinn DA, Carvalho C, Geller E, Khaw BA, Barlai-Kovach M, Zielonka J, Greene R, Strauss HW, Zapol WM: Tc-Fibrinogen scanning in adult respiratory distress syndrome 1 - 4. Am Rev Respir Dis 1987; 135:100-106.

210. Drucker EA, Strauss HW: Congestive heart failure with normal ejection fraction. Seminars in Nuclear Medicine 1987; 17:83-84.
211. Kaul S, Boucher CA, Newell JB, Chesler D, Greenberg JM, Okada RD, Strauss HW, Dinsmore RE, Pohost GM: Determination of the quantitative thallium imaging variables that optimize detection of coronary artery disease. J Am Coll Cardiol 1986;7:537-37.
212. Kaul S, Watson DD, Oliner JD, Okada RD, Weyman AE, Strauss HW: The relationship between left ventricular systolic function and plasma clearance of 169Yb-DTPA in normal and ischemia dogs. Nephron (in press).
213. Khaw BA, Strauss HW, Moore R, Fallon JT, Yasuda T, Gold HK, and Haber E: Myocardial damage delineated by indium-111 antimyosin Fab and Technetium-99m pyrophosphate. J Nucl Med 1987; 28:76-82.
214. Nishimura T, Yasuda T, Gold HK, Leinbach RC, Boucher CA, McKusick KA, Strauss HW: High-risk subgroup of inferior myocardial infarction: Importance of anterior wall motion and right ventricular function. Radiation Medicine 1986; 4(4): 112-118.
215. Tofler GH, Stone PH, Muller JE, Willich SN, Davis VG, Poole K, Strauss HW, Willerson JT, Jaffe AS, Robertson T, Passamani E, Braunwald E and the MILIS Study Group: Effect of gender and race on prognosis after myocardial infarction: Adverse prognosis for women, particularly black women. J Am Coll Cardiol 1987; 9:473-482.
216. Ruddy TD, Yasuda T, Barlai-Kovach M, Nedelman MA, Moore RH, Alpert JM, Correia JA, Newell JB, Okada RD, Boucher CA and Strauss HW: Measurement of both left ventricular function and regional myocardial perfusion with Xe-133 in dogs. Eur J Nucl Med 1987; 12:533-541.
217. Nishimura T, Yasuda T, Gold HK, Leinbach RC, Boucher CA, McKusick KA and Strauss HW: Incidence, severity and clinical course of right ventricular involvement after acute inferior myocardial infarction: assessment by sequential 99Tcm-pyrophosphate scan and gated blood pool. Nucl Med Commun 1986; 7:887-896.
218. Fischman AJ, Lees AM, Lees RS, Barlai-Kovach M, Strauss HW: Accumulation of native and methylated low density lipoproteins by healing rabbit arterial wall. Arteriosclerosis, 1987;7:361-366.
219. Dimsdale JE, Young D, Moore R, Strauss HW: Do Plasma Norepinephrine Levels Reflect Behavioral Stress? Psychosomatic Medicine, 1987; 49:275-382.

220. Khaw BA, Yasuda T, Gold HK, Leinbach RC, Johns JA, Kanke M, Barlai-Kovach M, Strauss HW, Haber E: Acute myocardial infarct imaging with indium-111 labeled monoclonal antimyosin Fab. J Nucl Med 1987; 28:1671-1678.

221. Tamaki N, Rabito CA, Alpert NM, Yasuda T, Correia JA, Barlai-Kovach M, Kanke M, Dragotakes SC and Strauss HW: Serial analysis of renal blood flow by positron tomography with rubidium-82. Am J Physiol 1986; 251(Heart Circ Physiol 20):H1024-H1030.

222. Isaacsohn JL, Lees AM, Lees RS, Strauss HW, Barlai-Kovach M and Moore TJ: Adrenal imaging with technetium-99m labeled low density lipoproteins. Metabolism 1986; 35:364-366.

223. Castronovo FP, McKusick KA, Dann J, Prout GR and Strauss HW: A simplified technique for quantifying 24-h whole body retention of 99mTc-labeled methylene diphosphonate. Int J Nucl Med Biol 1985; 12:209-214.

224. Herrman HC, Ruddy TD, Dec GW, Strauss HW, Boucher CA and Fifer MA: Ionotropic effect of enoximone in patients with severe heart failure: Demonstration by left ventricular end-systolic pressure-volume analysis. J Am Coll Cardiol 1987; 9(5):1117-1122.

225. Torchilin VP, Klibanov AL, Nossiff ND, Slinkin MA, Strauss HW, Haber E, Smirnov VN and Khaw BA: Monoclonal antibody modification with chelate-linked high-molecular-weight polymers: Major increases in polyvalent cation binding without loss of antigen binding. Hybridoma 1987; 6(3):229-240.

226. Tamaki N, Yasuda T, Leinbach RC, Gold HK, McKusick KA and Strauss HW: Spontaneous changes in regional wall motion abnormalities in acute myocardial infarction. Am J Cardiol 1986; 58:406-410.

227. Frist W, Yasuda T, Segall G, Khaw BA, Strauss HW, Gold HK, Stinson T, Oyer P, Baldwin J, Billingham M, McDougall R, Haber E: Noninvasive detection of human cardiac transplant rejection with 111In-antimyosin (Fab) imaging. Circulation 1987; 76:V81-85.

228. Haber E, Yasuda T, Palacios IF, Dec GW, Gold HK, Leinbach RC, Fallon JT, Strauss HW and Khaw BA: Antimyosin antibody imaging in the diagnosis of acute myocarditis. Europ Heart J 1987; 8: (Supplement J), 119-123.

229. Khaw BA, Gold HK, Yasuda T, Leinbach RC, Kanke M, Fallon JT, Barlai-Kovach M, Strauss HW, and Haber E: Scintigraphic quantification of myocardial necrosis in patients after intravenous injection of myosin specific antibody. Circulation 1986; 74:501-508.

230. Yasuda T, Palacios IF, Dec GW, Fallon JT, Gold HK, Leinbach RC, Strauss HW, Khaw BA and Haber E: Indium-111 monoclonal antimyosin antibody imaging in the diagnosis of acute myocarditis. Circulation 1987; 75:306-311.

231. Leppo JA, Okada RD, Strauss HW, Pohost GM: Effect of hyperaemia on thallium-201 redistribution in normal canine myocardium. Cardiovasc Res 1985; 19:679-685.

232. Gill JB, Ruddy TD, Newell JB, Finkelstein DM, Strauss HW: Prognostic importance of thallium uptake by the lungs during exercise in coronary artery disease. New England Journal of Medicine 1987; 317:1485-1489.

233. Miller DD, Liu P, Strauss HW, Block PC, Okada RD, Boucher CA: Prognostic value of computer-quantitated exercise thallium imaging early after percutaneous transluminal coronary angioplasty. J Am Coll Cardiol 1987; 10:275-83.

234. Herrmann HC, Ruddy TD, Dec GW, Strauss HW, Boucher CA, Fifer MA: Diastolic function in patients with severe heart failure: comparison of the effects of enoximone and nitroprusside. Circulation 1987; 75, No.6:1214-1221.

235. Cho Bo, Yasuda T, Moore RH, Boucher CA, Strauss HW: Detection of intracavitary masses on gated scans: a phantom study. Nuclear Medicine Communications 1987; 8:469-477.

236. Ohsuzu F, Yasuda T, Gold HK, Leinbach RC, Rosenthal SV, Alpert NM, Boucher CA, McKusick KA, Strauss HW: Evolutionary changes in left and right ventricular function in acute myocardial infarction. Annals of Nuclear Medicine 1987; 1(1):7-14.

237. Castronovo FP, Strauss HW: Dual trace resorption and apposition in a rat fracture Model. Nucl Med Biol 1988; 15(2):181-185.

238. Ruddy TD, Dighero HR, Newell JB, Pohost GM, Strauss HW, Okada RD, Boucher CA: Quantitative analysis of dipyridamole-thallium images for the detection of coronary artery disease. J Am Coll Cardiol 1987; 10:142-149.

239. Lees RS, Garabedian HD, Lees AM, Schumacher J, Miller A, Isaacsohn JL, Derksen A, Strauss HW: Technetium-99m low density lipoproteins: Preparation and biodistribution. J Nucl Med 1985; 26:1056-1062.

240. Tamaki N, Gill JB, Moore RH, Yasuda T, Boucher CA and Strauss HW: Cardiac response to daily activities and exercise in normal subjects assessed by an ambulatory ventricular function monitor. Am J Cardiol 1987; 59:1164-1169.

241. Tamaki N, Alpert MM, Rabito C, Barlai-Kovach M, Correia JA and Strauss HW: The effect of captopril on renal blood flow in renal artery stenosis assessed by positron tomography with rubidium-82. Hypertension 1988; 11:217-222.

242. Tamaki N, Yasuda T, Moore RH, Gill JB, Boucher CA, Hutter AM, Gold HK, and Strauss HW: Continuous measurement of left ventricular function by an ambulatory monitor in patients with coronary artery disease. J Am Coll Cardiol (In Press).

243. Jones GS, Livni E, Strauss HW, Hanson RN, Elmaleh DR: Synthesis and biologic evaluation of 1-[11C]-3,3-dimethylheptadecanoic acid. J Nucl Med 1988; 29:68-72.

244. Kaul S, Finklestein DM, Homma S, Leavitt M, Okada RD, Boucher CA: Superiority of quantitative exercise Tl-201 variables in determining long-term prognosis in ambulatory patients with chest pain: A comparison with cardiac catheterization. J Am Coll Cardiol 1988; 12:25-34.

245. Lees RS, Lees AM, Isaacsohn J, Fischman AJ, Schoen FJ, Strauss HW: Imaging human atherosclerosis with 99mTc-labeled low density lipoproteins. Arteriosclerosis 1988; 8:461-470.

246. Fischman AJ, Rubin RH, Khaw BA, Callahan RJ, Wilkinson R, Keech F, Nedelman M, Dragotakes S, Kramer PB, LaMuraglia GM, Lind S, and Strauss HW: Detection of acute inflammation with 111In-labeled nonspecific polyclonal IgG. Sem Nucl Med 1988; XVIII(4):335-344.

247. Casale PN, Guiney TE, Strauss HW, Boucher CA: Simultaneous low level treadmill exercise and intravenous dipyridamole stress thallium imaging. Am J Cardiol 1988; 62:799-802.

248. Froelich JW, Strauss HW, Moore RH, McKusick KA: Redistribution of visceral blood volume in upright exercise in healthy volunteers. J Nucl Med 1988; 29:1714-1718.

249. Khaw BA, Bailes JS, Schneider SL, Lancaster J, Powers J, Strauss HW, Lasher JC and McGuire WL: Human breast tumor imaging using 111In labeled monoclonal antibody: Athymic mouse model. Eur J Nucl Med 1988; 14:362-366.

250. Kiess MC, Dimsdale JE, Moore RH, Liu P, Newell J, Barlai-Kovach M, Boucher CA, Strauss HW: The effects of stress on left ventricular ejection fraction. Eur J Nucl Med 1988; 14:12-16.

251. Miller DD, Gill JB, Livni E, Elmaleh DR, Aretz T, Boucher CA and Strauss HW: Fatty acid analogue accumulation: A marker of myocyte viability in ischemic-reperfused myocardium. Circ Res 1988; 63:681-692.

252. Tamaki N, Yasuda T, Moore RH, Gill JB, Boucher CA, Hutter AM, Gold HK and Strauss HW: Continuous monitoring of left ventricular function by an ambulatory radionuclide detector in patients with coronary artery disease. J Am Coll Cardiol 1988; 12:669-679.

253. Rubin RH, Young LS, Hansen WP, Nedelman M, Wilkinson R, Nelles MJ, Callahan R, Khaw BA, Strauss HW: Specific and nonspecific imaging of localized Fisher immunotype I Pseudomonas aeruginosa infection with radiolabeled monoclonal antibody. J Nucl Med 1988; 29:651-656.

254. Castronovo FP, McKusick KA and Strauss HW: The infiltrated radiopharmaceutical injection: Dosimetric considerations. Eur J Nucl Med 1988; 14:93-97.

255. Eagle KA, Quertermous T, Singer DE, Mulley AG, Reder VA, Boucher CA, Strauss HW, Thibault GE: Left ventricular ejection fraction: Physician estimates compared with gated blood pool scan measurements. Arch Intern Med 1988; 148:882-885.

256. Takahashi H, Wilson B, Ozturk M, Motte P, Strauss W, Isselbacher KJ and Wands JR: In vivo localization of human colon adenocarcinoma by monoclonal antibody binding to a highly expressed cell surface antigen. Cancer Res 1988; 48:6573-6579.

257. Palmer E, Henrikson B, McKusick K, Strauss HW and Hochberg F: Pain as an indicator of bone metastasis. Acta Radiologica 1988; 29:445-449.

258. Miller DD, Kaul S, Strauss HW, Newell JB, Okada RD, Boucher CA: Increased exercise thallium-201 lung uptake: A noninvasive prognostic index in two-vessel coronary artery disease. Can J Cardiol 1988; 4(6):270-276.

259. Eagle KA, Strauss HW, Boucher CA: Dipyridamole myocardial perfusion imaging for coronary heart disease. Am J Card Imag 1988; 2(4):292-303.

260. Correia JA, Weise SB, Callahan RJ, Strauss HW: The kinetics of ingested ^{222}Rn in humans determined from measurements with ^{133}Xe . USEPA-Research Monograph #600/S1-87/013. 1988.

261. Eagle KA, Coley CM, Newell JB, Brewster DC, Darling C, Strauss HW, Guiney TE, Boucher CA: Combining clinical and thallium data optimizes preoperative assessment of cardiac risk before major vascular surgery. Ann Int Med 1989; 110:859-866.

262. Fischman AJ, Rubin RH, Khaw BA, Kramer PB, Wilkinson R, Ahmad M, Nedelman M, Locke E, Nossiff ND, Strauss HW: Radionuclide imaging of experimental atherosclerosis with nonspecific polyclonal immunoglobulin G. J Nucl Med 1989; 30:1095-1100.

263. Stone PH, Muller JE, Hartwell T, K BJ, Rutherford JD, Parker CB, T 2G, Strauss HW, Willerson JT, Robertson T, Braunwald E, Gaffe AS and Milis Study Group. The effect of diabetes mellitus on prognosis and serial left ventricular function after acute myocardial infarction: Contribution of both coronary disease and diastolic left ventricular dysfunction to the adverse prognosis. J Am Coll Cardiol 1989; 14:49-57.
264. Rocco TP, Dilsizian V, Fischman AJ, Strauss HW: Evaluation of ventricular function in patients with coronary artery disease. J Nucl Med 1989;30:1149-1165.
265. Takahashi H, Carlson R, Ozturk M, Sun S, Motte P, Strauss HW, Isselbacher KJ, Wands JR, Shouval D: Radioimmunolocalization of hepatic and pulmonary metastasis of human colon adenocarcinoma. Gastroenterology 1989; 96:1317-1329.
266. Khaw BA, Klibanov AL, Nossiff ND, Powers JD, Strauss HW, Haber E: Modification of monoclonal antimyosin antibody: Enhanced specificity of localization and scintigraphic visualization in acute experimental myocardial infarction. J Mol Cell Cardiol 1989; 21 (Suppl 1):31-35.
267. Griebel RW, Black PM, Pile-Spellman J, Strauss HW: The importance of "Accessory" outflow pathways in hydrocephalus after experimental subarachnoid hemorrhage. Neurosurg 1989; 24:287-192.
268. Kradin RL, Lazarus DS, Dubinett SM, Gifford J, Grove B, Kurnick JT, Preffer FI, Pinto CE, Davidson E, Callahan RJ, Strauss HW: Tumour-infiltrating lymphocytes and interleukin-2 in treatment of advanced cancer. The Lancet 1989; 577-580.
269. Fischman AJ, Saito T, Dilsizian V, Rocco P, Yasuda T, Gonzalez E, Elmaleh D, Strauss HW: Myocardial fatty acid imaging: Rationale, comparison of 11C and 123-I labeled fatty acids, and potential clinical utility. Am J Card Imag 1989; 3:288-296.
270. LaMuraglia CM, Fischman AJ, Strauss HW, Keech F, Wilkinson R, Callahan RJ, Khaw BA, Rubin RH: Utility of the indium 111-labeled human immunoglobulin G scan for the detection of focal vascular graft infection. J Vasc Surg 1989;10:20-28.
271. Meignan M, Palmer EL, Waltman AC, Strauss HW: Zones of increased perfusion (hot spots) on perfusion lung scans: Correlation with pulmonary arteriograms. Radiology 1989; 173:47-52.
273. Rubin RH, Fischman AJ, Callahan RJ, Khaw BA, Keech F, Ahman M, Wilkinson R, Strauss HW: 111In-labeled nonspecific immunoglobulin scanning in the detection of focal infection. N Engl J Med 1989; 321:935-940.

274. Morrel EM, Tompkins RG, Fischman AJ, Wilkinson RA, Burke JF, Rubin RH, Strauss HW and Yarmush ML: Autoradiographic method for quantitation of radiolabeled proteins in tissues using indium-111. J Nucl Med 1989; 30:1538-1545.

275. Dilsizian V, Rocco TP, Strauss HW and Boucher CA: Technetium-99m isonitrile myocardial uptake at rest. I. Relation to severity of coronary artery stenosis. J Am Coll Cardiol 1989; 14:1673-1677.

276. Levinson JR, Boucher CA, Coley CM, Guiney TE, Strauss HW, Eagle KA: Usefulness of semiquantitative analysis of dipyridamole-thallium-201 redistribution for improving risk stratification before vascular surgery. Am J Cardiol 1990; 66:406-410.

277. Ishibashi M, Yasuda T, Rocco TP, Alpert N, Moore RH, Strauss HW: Evaluation of left ventricular diastolic function using an ambulatory radionuclide monitor: Relationship to left ventricular systolic performance. Am Heart J 1990; 120:96-103.

278. Fischman AJ, Ahmad M, Chheda H, Peto CA, Wilkinson R, Strauss HW: Reliability of radionuclide scintigraphy for detection of testicular torsion: An animal study. Eur J Nucl Med 1990; 16:657-661.

279. Yasuda T, Okada RD, Leinbach RC, Gold HK, Phillips H, McKusick KA, Glover DK, Boucher CA, Strauss HW: Serial evaluation of right ventricular dysfunction associated with acute inferior myocardial infarction. Am Heart J 1990; 119:816-822.

280. Flamm SD, Taki J, Moore R, Lewis SF, Keech F, Maltais F, Ahmad M, Callahan R, Dragotakes S, Alpert N, Strauss HW: Circulation 1990; 81:1550-1559.

281. Fischman AJ, Rubin RH, White JA, Locke E, Wilkinson RA, Nedelman M, Callahan RJ, Khaw BA, Strauss HW: Localization of Fc-Fab fragments of nonspecific polyclonal IgG at focal sites of inflammation. J Nucl Med 1990; 31:1199-1205.

282. Fink GD, Montgomery JA, David F, Garneau M, Livni E, Elmaleh D, Strauss W and Brunengraber H: Metabolism of D-methyl-heptadecanoic acid in the perfused rat heart and liver. J Nucl Med 1990; 31:1823-1830.

283. Dilsizian V, Rocco RP, Bonow RO, Fischman AJ, Boucher CA, Strauss HW: Cardiac blood-pool imaging II: Applications in noncoronary heart disease. J Nucl Med 1990; 31:10-22.

REVIEWS & INVITED ARTICLES

1. Strauss HW, Pitt B: Cardiovascular Nuclear Medicine. Role in patients with coronary heart disease. Cardiovas Nucl Med, November/December, 1974.
2. Wagner HN Jr, Strauss HW: Radioactive tracers in the differential diagnosis of pulmonary embolism. Prog Cardiovas Dis, 1975; XVII:271-282.
3. Strauss, HW, Pitt B: Cardiovascular nuclear medicine: role in patients with coronary heart disease. Appl Rad, 1975; 4:57-62.
4. Wagner HN Jr, Strauss HW: Radioactive tracers in cardiac diagnosis. Cardiovas Clinics,, 1975; 6:319-336.
5. Pitt B, Strauss HW: Myocardial imaging in the noninvasive evaluation of patients with ischemic heart disease. Amer J Card 1976; 37:797-806.
6. Strauss HW: Editorial - Quo Vadis, Nuclear Medicine? Applied Radiology, November/December, 1975; pp 163 & 193.
7. Strauss HW: New Horizons in Radiology Nuclear Medicine: A New Look at an Old Problem. Radiology, 1976; 121:257-268.
8. Strauss HW and Pitt B: The gated cardiac blood pool scan: Use in patients with coronary heart disease. Prog Cardiovas Dis, Nov/Dec 1977; pp 207-216.
9. Pitt B and Strauss HW: Myocardial perfusion imaging and gated cardiac blood pool scanning: Clinical application. Am J Card, 1976; 38:739-746.
10. Strauss HW and Pitt B: Common procedures for the non-invasive determination of regional myocardial perfusion, evaluation of regional wall motion and detection of acute infarction. Am J Card, 1976; 6:731-738.
11. Pitt B and Strauss HW: Cardiovascular Nuclear Medicine, Sem Nucl Med, 1977, VII (1):3-6.
12. Strauss HW and Pitt B: Thallium-201 as a myocardial imaging agent. Sem Nucl Med, 1977; VII (1):49:58.
13. Strauss HW and Pitt B: Evaluation of cardiac function and structure with radioactive tracer techniques. Circulation, 1978; 57:645-654.
14. Bingham JB, Strauss HW, Pohost GM and McKusick KA: Nuclear medicine applications to the study of coronary artery disease. Texas Medicine, 1979; 75:55-61.

15. Strauss HW, McKusick KA, Boucher CA, Bingham JB and Pohost GM: Of linens and laces - The eighth anniversary of the gated blood pool scan. Sem Nucl Med 1979; 9:296-309.
16. Pohost GM, Alpert JM, Ingwall JS and Strauss HW: Thallium redistribution: Mechanism and clinical utility. Sem Nucl Med, 1980; 10:70-93.
17. Nichols AB, Beller GA, Cochavi S, McKusick KA, Strauss HW: Detection of Pulmonary emboli by positron imaging of inhaled 15 O-labeled carbon dioxide. Sem Nucl Med, 1980; 10:252-259.
18. Leppo J, Scheuer J, Pohost GM, Freeman LM and Strauss HW: The evaluation of ischemic heart disease thallium-201 with comments on radionuclide angiography. Sem Nucl Med, 1980; 10:115-126.
19. Bingham JB, McKusick KA and Strauss HW: Right atrial enlargement - cardiac imaging. Sem Nucl Med, 1980; 10:195-196.
20. Strauss HW: When the well become ill. Applied Radiology, July-August, 1979; 8:98.
21. Winzelberg GC, Froelich JW, McKusick KA, Strauss HW: Detection of gastrointestinal hemorrhage. Bulletin of the New York Academy of Medicine. 1981; 57:755-758.
22. Bingham JB, McKusick KA, Boucher CA, Strauss HW: Paradoxical Septal Motion. 1981; 11:165-167.
23. Gill JB, Moore RH, Miller DD, Tamaki N, Ruddy T, Barlai-Kovach M, Boucher CA, Strauss HW: Cardiac single photon emission computerized tomography: The critical period. International Journal of Cardiac Imaging 1985; 1:127-142.
24. Miller DD, Gill JB, Fischman A, Callahan RJ, Elmaleh DR, Boucher CA, Strauss HW: New radionuclides for cardiac imaging. Prog in Cardiovasc Dis 1986; 18:419-434.
25. Miller DD, Elmaleh DR, McKusick KA, Boucher CA, Callahan RJ, Strauss HW: Radiopharmaceuticals for cardiac imaging. Radiologic Clinics of North America, Symposium on Advances in Cardiac Radiology, 1985; 23(4):765-781.
26. Boucher CA, Brewster DC, Darling RC, Okada RD, Pohost GM, Strauss HW: Dipyridamole-thallium imaging to assess Cardiac risk before peripheral vascular surgery. Cardiology Board Review 1985; 2:66-74.
27. Khaw BA, Gold HK, Yasuda T, Fallon JT, Leinbach RC, Barlai-Kovach M, Strauss HW, Haber E: Imaging with antibodies. In: Handbook of Experimental Cardiology. Haber E, ed, New York. Raven Press (In Press).

28. Strauss HW, Carrasquillo JA, Larson SM: Antibody imaging: The smoke, the fire and the false alarm. Int J Nucl Med Biol 1985; 12:401-403.
29. Gill JB, Miller DD, Boucher CA, Strauss HW: Clinical decision making: Dipyridamole thallium imaging. J Nucl Med 1986; 27:132-137.
30. Strauss HW and Boucher CA: Myocardial perfusion studies: Lessons from a decade of clinical use. Radiology 1986; 160:577-584.
31. Strauss HW and Palmer EL: Cardiovascular Nuclear Medicine - Training for the future (Editorial). J Nucl Med 1986; 27:1642-1643.
32. Strauss HW: Editorial - Quo Vadis, Nuclear Medicine? Applied Radiology November/December, 1975: pp 163 & 193.
33. Strauss HW, Pohost GM, McKusick KA, Alpert N: Studying the occult: Applied Radiology 1978; 7:143-152 (Editorial).
34. Strauss HW: ...And Now Myoglobin? J Nucl Med 1979; 20:165-166, (Editorial).
35. Boucher CA, Pohost GM, Poulin FK, Okada RD, Strauss HW, Harthorne JW: Use of radionuclide angiography to assess alterations in ventricular performance at rest and exercise during ventricular pacing. Proceedings of the Vth World Symposium on Cardiac Pacing. October, 1979; Section 13-5.
36. Greene R, Jantsch H, Boggis C, Strauss HW and Lowenstein E: Respiratory distress syndrome with new considerations. Radiol Clin North Am 1983; 21:699-708.
37. Strauss HW and Elmaleh DR: Musings on PET and SPECT. Circulation 1986; 73:611-614.
38. Khaw BA, Yasuda T, Palacios I, Fallon JT, Dec W, Nicol P, Fischman AJ, Strauss HW, Haber E: Diagnosis of acute myocarditis with radiolabeled monoclonal antimyosin antibody: Immunoscintigraphic evaluation. Berlin, Heidelberg: Springer-Verlag 1988:263-273. (In Press).
39. Fischman AJ, Moore RH, Gill JB and Strauss HW: Gated blood pool tomography: A technology whose time has come. Sem Nucl Med 1989; XIX(1):13-21.
40. Fischman AJ, Khaw BA, Strauss HW: Quo Vadis Radioimmune Imaging. J Nucl Med 1989; 30:1911-1915.

1. Strauss HW, Metarajan TK, Sziklas JJ, Ballose KP, Fukushima T and Wagner HN, Jr. Computer assistance in the interpretation and quantification of lung scans. In: Kenny PJ and Smith EM, eds. Quantitative organ visualization in nuclear medicine. Coral Gables, FL: University of Miami Press, 1971:833.

2. Strauss HW, Wagner HN, Jr, Wesselhoeft H and Hurley PJ: Radionuclide angiography in pediatrics. In: James AE Jr, Wagner HN Jr, and Cooke RE, eds. Pediatric nuclear medicine. Philadelphia: WB Saunders, 1974:219-230.

3. Strauss HW and Pitt B: Nuclear Cardiology. In: Weissler A, ed. Non-invasive Techniques in Cardiology. New York: Grune and Stratton, 1974:(7)369-400.

4. Strauss HW: Regional ventricular function and myocardial perfusion by non-invasive tracer techniques: An area of potential importance for computer applications. In: Proceedings of the 3rd Symposium on the Sharing of Computer Programs and Technology in Nuclear Medicine. Miami: June 8-9, 1973, Sponsored by Oak Ridge National Labs, Oak Ridge, TN.

5. Strauss HW: Detection and quantification of intracardiac shunts. In: Strauss HW, Pitt B and James AE, eds. Cardiovascular Nuclear Medicine. St. Louis: C.V. Mosby Co, 1974:128-137.

6. Strauss HW, Wagner HN Jr: Cardiovascular nuclear medicine in the evaluation of patients with coronary heart disease. In: Russek HI, ed. The William Likoff Symposium - New Horizons in Cardiovascular Practice. Baltimore: University Park Press, 1975:97-109.

18. Strauss HW, Kirschner P and Wagner H: Nuclear Medicine in the evaluation of renal disease. In: Early LE and Gottschalk CW, eds. Diseases of the kidney. Boston: Little, Brown & Co, 1978:(4):149-164.

19. Pitt B, Thrall JH and Strauss HW: Clinical Application of gated cardiac blood pool imaging. In: Raport E, ed. Cardiology Update. New York: Elsevier:1979.

20. McKusick KA, Strauss HW, Bingham JB, Pohost GM and Guiney TE: Thallium-201 myocardial redistribution for the diagnosis of coronary artery disease. In: Soin J and Brooks HL, eds. Nuclear Cardiology for Clinician. New York: Futura Publishing Co, 1979.

21. Berman DS, Gilday DL, Mason DT, Mishkin FS, Pitt B, De Roo MJK, Siegel ME and Strauss HW: The cardiovascular system. In: DeRocha AFG and Harbert JC, eds. Textbook of Nuclear Medicine: Clinical Applications. Philadelphia: Lea & Feibinger, 1979:263-343.

22. Pitt B and Strauss HW: Clinical application of myocardial imaging with thallium-201. In: Willerson J, ed. Nuclear Cardiology. Philadelphia: FA Davis, 1979:125-137.

23. Strauss HW, McKusick KA, Bingham JB and Pohost GM: Myocardial perfusion imaging with thallium-201. In: Sodee DB and Early PJ, eds. Technology and Interpretation of Nuclear Procedures. St. Louis: C.V. Mosby Co, 1979:3rd edition.

24. Pohost GM, Strauss HW and Beller GA: Radionuclide imaging. In: Johnson RA, Haber E, Austen WG, eds. Practice of Cardiology. Boston: Little, Brown Co, 1980.

25. Boucher CA, Pohost GM, Poulin FK, Okada RD, Strauss HW, Harthorne JW: Use of radionuclide angiography to assess alterations in ventricular performance at rest and exercise during ventricular pacing. In: Meere C, ed. Proceedings of the 6th World Symposium on Cardiac Pacing, October, 1979:Section 13-5.

26. Strauss HW and Pitt B: Gated blood pool imaging: Techniques. In: Strauss HW and Pitt B, eds. Cardiovascular Nuclear Medicine, 2nd Edition. St. Louis: C.V. Mosby Co, 1979:126-139.

27. Pitt B, Thrall JH and Strauss HW: Gated blood pool imaging: Clinical applications. In: Strauss HW and Pitt B, eds. Cardiovascular Nuclear Medicine, 2nd Edition. St. Louis: C.V. Mosby Co, 1979:140-147.

28. Pitt B, Strauss HW: Clinical application of myocardial imaging with thallium. In: Strauss HW and Pitt B, eds. Cardiovascular Nuclear Medicine, 2nd Edition, St. Louis: C.V. Mosby Co, 1979:241-252.

29. Pohost GM, Fallon JT and Strauss HW: Radionuclide techniques in cardiomyopathy. In: Strauss HW, Pitt B, eds. Cardiovascular Nuclear Medicine, 2nd Edition, St. Louis: C.V. Mosby Co, 1979:326-340.

30. Bakal CW, Strauss HW: Radionuclide Imaging. In: Noninvasive Cardiac Imaging, Pohost GM, Parisi A and Morganroth J (eds), Yearbook Medical Publishers, Chicago 1983: 21-52.

31. Winzelberg CG, Boucher CA, Okada RD, Bingham JB, McKusick KA, Pohost GM and Strauss HW: Cardiovascular Nuclear Medicine: Gated cardiac blood pool scintigraphy, ²⁰¹Thallium myocardial perfusion scintigraphy, and cardiac shunt scintigraphy. In: Multiple Imaging Procedures: HEART, Hipona F (ed), Grune and Stratton, New York, 1983:5:183-216.

32. Bingham JB, McKusick KA, Strauss HW: Cardiovascular Nuclear Medicine. In: Clinical Nuclear Medicine, Maisey MN, Britton KE and Gilday DL (eds): Chapman and Hall, London, 1983:1-28.

33. Bakal C, McKusick KA, Strauss HW: Principles and techniques of cardiac nuclear imaging. In: Atherosclerosis Reviews, Hegyeli RJ (ed), Raven Press Inc, New York, 1983: 101 -127.

34. Osbakken MD, Okada RD and Strauss HW: The normal adult gated blood pool scan: Qualitative Analysis. In: Techniques, Diagnostics, and Advances in Nuclear Cardiology. Osbakken MD (ed), Reeves WC, Flickinger FW (assoc eds), Charles C. Thomas Publisher, Illinois, 1983: 200-217.

35. Moore RH, Zielonka JS, Wilson RA, Sullivan PJ, Alpert NM, McKusick KA, Boucher CA, Strauss HW: The VEST - Description of the instrument and initial validation: A device for the ambulatory measurement of ejection fraction. In: Peter D. Esser, ed. Emission Computed Tomography: Current Trends. New York, Society of Nuclear Medicine, 1983, pp263-274.

36. Strauss HW, McKusick KA, Boucher CA: Interventional Nuclear Cardiology. In: Interventional Nuclear Medicine, Spencer RP (ed). Grune and Stratton, Inc., New York, 1984: 279-286.

37. Treves ST, Hurwitz R, Kuruc A, Strauss HW: Heart. In: Pediatric Nuclear Medicine, Treves ST (ed). Springer-Verlag, New York, 1984: 245-287.

38. Kiess MC, Boucher CA, Strauss HW: Nuclear Imaging: The assessment of cardiac performance. In: Diagnostic Cardiology: Noninvasive Imaging Techniques, Come PC (ed), Lippincott, New York, 1984: 85-123.

39. Strauss HW, Elmaleh D, Boucher CA, McKusick KA: Radiopharmaceuticals for cardiovascular studies. In: Diagnostic Nuclear Medicine, 2nd Edition. Gottschalk A, Hoffer PB, Berger HJ, Potchen EJ (eds), Williams and Wilkins Publishers, Baltimore, 1985 (In Press).

40. Strauss HW, Gold HK, Alpert NM, McKusick KA, Elmaleh D, Treves S: Continuous evaluation of coronary flow with Iridium-191m. In: Single-Photon Ultrashort-Lived Radionuclides. Paras P and Thiessen JW (eds), Office of Scientific and Technical Information, US Dept of Energy, Springfield, VA, 1985: 97-101.

41. Goodman MM, Callahan AP, Knapp Jr. FF, Strauss HW, Elmaleh D, Richards P, Mausner LF: New myocardial imaging agents: Preparation of 15-(p-(123I)-Iodophenyl)-6 tellurapentadecanoic acid from Na(123I) by a triazene decomposition reaction. In: The Developing Role of Short-Lived Radionuclides in Nuclear Medicine Practice. Paras P and Thiessen JW (eds), Office of Scientific and Technical Information. U.S. Dept of Energy, Springfield, VA, 1985: 488-493.

42. Knapp Jr. FF, Goodman MM, Elmaleh DR, Okada R, Strauss HW: Development of radioiodinated fatty acids for application in Nuclear Cardiology. In: The Developing Role of Short-Lived Radionuclides in Nuclear Medicine Practice. Paras P and Thiessen JW (eds), Office of Scientific and Technical Information. U.S. Dept of Energy, Springfield, VA, 1985: 289-311.

43. Khaw BA, Yasuda T, Gold HK, Fallon JT, Moore RH, Strauss HW, Haber E: Imaging with monoclonal antimyosin: Acute myocardial infarct visualization and sizing by scintitomography. Smirnov VN, Katz AM (eds), Harwood Academic Publishers, London. IN: Myocardial Metabolism, Soviet Medical Review Supplement Series. Cardiology, 1987: 2:68-72.

44. Khaw BA, Yasuda T, Palacios IF, Fallon JT, Dec GW, Nicol PD, Fischman AJ, Strauss HW, Haber E: Diagnosis of acute myocarditis with radiolabeled monoclonal antimyosin antibody: Immunoscintigraphic evaluation. IN: Schultheiss H-P, ed. New concepts in viral heart disease. Berlin, Heidelberg: Springer-Verlag 1988:363-373.

45. Boucher CA, Kantor HL, Okada RD, Strauss HW: Radionuclide imaging and magnetic resonance imaging. IN: The Practice of Cardiology (2nd Edition). KA Eagle, E Haber, RW DeSanctis, and WG Austen (eds), Little, Brown and Company, Boston/Toronto 1988: 1601-1635.

46. Strauss HW, Fischman AJ, Khaw BA, Callahan RJ, Nedelman M, Wilkinson R, Keech F, Kramer P, Hanson WP and Rubin R: Detection of acute inflammation with immune imaging. IN: Monoclonal Antibodies in Immunoscintigraphy. JF Chatel (ed), CRC Press, Boca Raton, FL 1988:325-335.

47. Khaw BA, Strauss HW and Haber E: Production and Characterization of monoclonal antimyosin antibody: Immunoscintigraphic visualization of necrotic myocardium. IN: Monoclonal Antibodies in Immunoscintigraphy. JF Chatel (ed), CRC Press, Boca Raton, FL 1988:339-355.

48. Miller DD and Strauss HW: Radionuclides for Cardiac Imaging. IN: Clinical Cardiac Imaging. Miller DD, Burns RJ, Gill JB, Ruddy TD (eds), McGraw-Hill, New York, NY 1988: 3-25.

49. Strauss HW, Elmaleh DR, Boucher CA KAM: Radiopharmaceuticals for cardiovascular studies. IN: Diagnostic Nuclear Medicine Gottschalk A, Hoffer PB, Potchen EJ (eds), Williams & Wilkins, Baltimore, MD, 1988: 248-258.

50. Barlai-Kovach M, Hergenrother J, Desko G, Strauss HW: The cardiovascular system. IN: Nuclear Medicine Technology and Techniques (2nd edition), Bernier DR, Christian PE, Langan JK, Wells LD (eds), Mosby, St. Louis 1989; 14:355-380.

BOOKS EDITED

1. Strauss HW, Pitt B and James AE Jr: Cardiovascular Nuclear Medicine. St. Louis: C.V. Mosby Co, 1974.

2. Strauss HW, Pitt B, Rouleau J, Bailey IK, Wagner HN: Atlas of Cardiovascular Nuclear Medicine. St. Louis: C.V. Mosby Co, 1977.

3. Strauss HW, Pitt B: Cardiovascular Nuclear Medicine. 2nd Edition. St. Louis: C.V. Mosby Co, 1979.

274. Morrel EM, Tompkins RC, Fischman AJ, Wilkinson RA, Burke JF, Rubin RH, Strauss HW and Yarmush ML: Autoradiographic method for quantitation of radiolabeled proteins in tissues using indium-111. J Nucl Med 1989; 30:1538-1545.

275. Dilsizian V, Rocco TP, Strauss HW and Boucher CA: Technetium-99m isonitrile myocardial uptake at rest. I. Relation to severity of coronary artery stenosis. J Am Coll Cardiol 1989; 14:1673-1677.

276. Levinson JR, Boucher CA, Coley CM, Guiney TE, Strauss HW, Eagle KA: Usefulness of semiquantitative analysis of dipyridamole-thallium-201 redistribution for improving risk stratification before vascular surgery. Am J Cardiol 1990; 66:406-410.

277. Ishibashi M, Yasuda T, Rocco TP, Alpert N, Moore RH, Strauss HW: Evaluation of left ventricular diastolic function using an ambulatory radionuclide monitor: Relationship to left ventricular systolic performance. Am Heart J 1990; 120:96-103.

278. Fischman AJ, Ahmad M, Chheda H, Peto CA, Wilkinson R, Strauss HW: Reliability of radionuclide scintigraphy for detection of testicular torsion: An animal study. Eur J Nucl Med 1990; 16:657-661.

279. Yasuda T, Okada RD, Leinbach RC, Gold HK, Phillips H, McKusick KA, Glover DK, Boucher CA, Strauss HW: Serial evaluation of right ventricular dysfunction associated with acute inferior myocardial infarction. Am Heart J 1990; 119:816-822.

280. Flamm SD, Taki J, Moore R, Lewis SF, Keech F, Maltais F, Ahmad M, Callahan R, Dragotakes S, Alpert N, Strauss HW: Circulation 1990; 81:1550-1559.

281. Fischman AJ, Rubin RH, White JA, Locke E, Wilkinson RA, Nedelman M, Callahan RJ, Khaw BA, Strauss HW: Localization of Fc-Fab fragments of nonspecific polyclonal IgG at focal sites of inflammation. J Nucl Med 1990; 31:1199-1205.

282. Fink GD, Montgomery JA, David F, Carneau M, Livni E, Elmaleh D, Strauss W and Brunengraber H: Metabolism of B-methyl-heptadecanoic acid in the perfused rat heart and liver. J Nucl Med 1990; 31:1823-1830.

283. Dilsizian V, Rocco RP, Bonow RO, Fischman AJ, Boucher CA, Strauss HW: Cardiac blood-pool imaging II: Applications in noncoronary heart disease. J Nucl Med 1990; 31:10-22.

284. Hurford WE, Zapol WM, Lynch KE, Flamm S, Lowenstein E, Strauss HW: The influence of positive end-expiratory pressure on pulmonary blood volume changes in adult respiratory distress syndrome. J Crit Care 1990; 5:227-237.

PATENTS

1. A Bifocal Diverging Collimator.
Inventors: J.W. Leask and H.W. Strauss
Issued: February 10, 1981.
2. Method and Apparatus for Radiolabeling Red Blood Cells.
Inventors: H.W. Strauss, R.J. Callahan and J.W. Froelich
Issued: February 8, 1983. Patent No. 4,372,294.
3. Labeled Phosphonic Acid Compositions for Investigations of In Vivo Deposits of Calcium.
Inventors: F.P. Castronovo, H.W. Strauss, M.S. Potsaid.
Issued: May 7, 1985. Patent No. 4,515,766.
4. Ambulatory Ventricular Function Monitor.
Investors: H.W. Strauss, R.H. Moore, and N.M. Alpert.
Issued: January 6, 1987,
Patent No. 4,633,881.
5. Organ Infarct Imaging with Technetium Labeled Glucarate
Investigators: H.J. Berger, B.A. Khaw, K.Y. Pak,
H.W. Strauss
Issued: August 28, 1990
Patent No. 4,952,393

VOUCHER COVER SHEET

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
B	R	I	S	T	O	L	-	M	Y	E	R	S		S	Q	U	I	A	R		C	O	.		
P	H	A	R	M	A	C	E	U	T	I	C	A	L		G	R	O	U	P						
A	T	T	N		A	N	T	H	O	N	Y		G		S	I	P	M	A	N					
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ACCOUNT NO: AA305 AMD CD NO: _____FEE CATEGORY: 3A CONTROL NO: 116972DATE RECEIVED: 8/17/92CHECK AMOUNT: \$250AMOUNT RETAINED: \$230AMOUNT REFUNDED: \$20COMMENTS: _____

31X6875

GOVERNMENT CODE: Y N

DOCUMENT NUMBER	
TRANSACTION CODE	AMOUNT
B&R NUMBER	
FIN	
FEE RETAINED CODE 303	FEE PAID CODE 410
DISCOUNT (CODE 000) TAKEN	DISCOUNT (CODE 415) LOST
AMOUNT PAID <u>\$20.00</u>	
FINAL Y N	

SIGNED: S. Kimberly ^{AA}DATE: 8/19/92 M. H. H. H.

(FOR LFMS USE)
INFORMATION FROM LTS

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

PROGRAM CODE: 03211
STATUS CODE: 0
FEE CATEGORY: 3A
EXP. DATE: 19970430
FEE COMMENTS: -----
DECOM FIN ASSUR REQD: Y
.....

LICENSE FEE TRANSMITTAL

A. REGION *I*

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: E. P. SQUIBB & SONS, INC.
RECEIVED DATE: 920811
DOCKET NO: 3005222
CONTROL NO.: 116972
LICENSE NO.: 29-00139-02
ACTION TYPE: AMENDMENT

2. FEE ATTACHED

AMOUNT: *\$250.00*
CHECK NO.: *269865*

3. COMMENTS

SIGNED *W. G. Perkins*
DATE *8/11/92*

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED *1* *✓*)

1. FEE CATEGORY AND AMOUNT: *3A* *\$220*

2. CORRECT FEE PAID *✓* APPLICATION MAY BE PROCESSED FOR:

AMENDMENT *✓*
RENEWAL
LICENSE

3. OTHER

SIGNED *B. Brown*
DATE *8/11/92*