

**Elkins Park
Radiology Associates Ltd.**

8250 OLD YORK ROAD ■ ELKINS PARK, PA 19117
TELEPHONE 215 - 884-XRAY

Bernard J. Ostrum, M.D., President

Sucha O. Asbell, M.D.
Myron Blumberg, M.D.
Constantin Cope, M.D.
Robert E. Cantor, M.D.
Birgit A. Ehlers, M.D.
William B. Garfinkle, M.D.
William Herring, M.D.
Harold J. Isard, M.D.
Sheldon R. Karasick, M.D.
David P. Mayer, M.D.
Arthur D. Magilner, M.D.
Harvey L. Nisenbaum, M.D.

Bernard J. Ostrum, M.D.
Mary Scanlon, M.D.
Bernard Shapiro, M.D.
Bruce P. Sherman, M.D.
David M. Sklaroff, M.D.
Jerome J. Spunberg, M.D.
Robert M. Zeit, M.D.
Alan S. Baker, M.S.
Gerald R. Edelstein, M.S.
George J. Kolmann, Ph.D.
Michael P. Nunno, M.S.

May 14, 1985

John E. Glenn, Ph.D., Chief
Nuclear Materials Section B
Division of Engineering and Technical Programs
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 191406

Dear Doctor Glenn:

RE: NRC LICENCE NO. 37-20727-01

Because of the recent deaths of Doctors Robert E. Cantor and Bruce P. Sherman, please delete their names and add P. Todd Makler, Jr., M.D. I have enclosed two(2) copies each of Supplements A and B, NRC Form 313M, as well as two(2) copies of Doctor Makler's curriculum vitae.

Although Doctor Makler's certification from the American Board of Nuclear Medicine qualifies him to use the radioactive materials in Groups I, II, and III, we request that you also approve his use of by-product material listed in Group IV. An inspection of Supplement B indicates that Doctor Makler has met the minimum standards for soluble P-32 treatment and I-131 treatment of hyperthyroidism, but has only participated in one(1) case, instead of the required three(3), using colloidal P-32. We feel, however, that since nearly all the radionuclide therapy performed at the Imaging Center will be for treatment of hyperthyroidism, for which Doctor Makler has treated forty(40) patients or four(4) times the minimum required amount, Doctor Makler should be approved for Group IV. His extensive experience and the fact that he will be working closely with Doctor Shapiro should also be considered.

RECEIVED BY LFMB	
Date	6/12/85
Leg.	Sure Pg. 6-7
By	Jacques
Orig. To	
Action Compl.	6/17/85

Applicant	7182
Check No.	8120 7C
Amount, Fee Category	Amendment
Type of Fee	6/17/85
Date Check Rec'd.	
Received By	Jacques

RECEIVED-REGION I
MAY 29 1985
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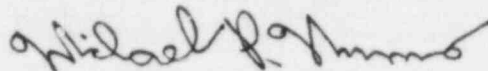
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37-20727-01 PDR

MAY 29 1985

Lastly, please notice that the required amendment fee is enclosed.

As always, we appreciate your cooperation and recognition of our efforts to maintain a quality radiation safety program.

Sincerely,

A handwritten signature in dark ink, appearing to read "Michael P. Nunno", with a stylized flourish at the end.

Michael P. Nunno, M.S., CRP, CHP
Radiation Safety Officer

cc: B. Shapiro, M.D.
P. Todd Makler, M.D.
R. Jackson

Enclosures

(981)

TRAINING AND EXPERIENCE AUTHORIZED USER OR RADIATION SAFETY OFFICER

1 NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER P. Todd Makler, Jr., M.D.	2 STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE Pennsylvania
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3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
American Board of Nuclear Medicine	Nuclear Medicine	1976

4 TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING A	LOCATION AND DATE(S) OF TRAINING B	TYPE AND LENGTH OF TRAINING	
		LECTURE / LABORATORY COURSES (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D
a. RADIATION PHYSICS AND INSTRUMENTATION	Univ. of Pennsylvania	70	30
b. RADIATION PROTECTION	Univ. of Pennsylvania	20	10
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	Univ. of Pennsylvania	14	6
d. RADIATION BIOLOGY	Univ. of Pennsylvania	14	6
e. RADIOPHARMACEUTICAL CHEMISTRY	Univ. of Pennsylvania	20	10

5. EXPERIENCE WITH RADIATION. (Actual use of Radioisotopes or Equivalent Experience)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE

PRECEPTOR STATEMENT

Supplement B must be completed by the applicant physician's preceptor. If more than one preceptor is necessary to document experience, obtain a separate statement from each.

1. APPLICANT PHYSICIAN'S NAME AND ADDRESS

FULL NAME

P. Todd Makler, Jr., M.D.

STREET ADDRESS

960 Meeting House Road

CITY

Rydal

STATE

PA

ZIP CODE

19046

KEY TO COLUMN C

PERSONAL PARTICIPATION SHOULD CONSIST OF:

- 1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for prescribed dosage.
- 2-Collaboration in dose calibration and actual administration of dose to the patient including calculation of the radiation dose, related measurements and plotting of data.
- 3-Adequate period of training to enable physician to manage radioactive patients and follow patients through diagnosis and/or course of treatment.

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
I-131 or I-125	DIAGNOSIS OF THYROID FUNCTION	20	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	10	
	LIVER FUNCTION STUDIES	0	
	FAT ABSORPTION STUDIES	0	
	KIDNEY FUNCTION STUDIES	350	
	IN VITRO STUDIES	500	
OTHER			
I-125	DETECTION OF THROMBOSIS	50	
I-131	THYROID IMAGING	20	
P-32	EYE TUMOR LOCALIZATION	0	
Se-75	PANCREAS IMAGING	1	
Yb-169	CISTERNOGRAPHY	12	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	300	
OTHER			
Tc-99m	BRAIN IMAGING	480	
	CARDIAC IMAGING	300	
	THYROID IMAGING	100	
	SALIVARY GLAND IMAGING	9	
	BLOOD POOL IMAGING	200	
	PLACENTA LOCALIZATION	0	
	LIVER AND SPLEEN IMAGING	1200	
	LUNG IMAGING	300	
	BONE IMAGING	1500	
OTHER	Hepatobiliary Imaging	200	

RECEPTOR STATEMENT (Continued)

2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN (Continued)

ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED B	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	3	
P-32 (Colloidal)	INTRACAVITARY TREATMENT	1	
I-131	TREATMENT OF THYROID CARCINOMA	4	
	TREATMENT OF HYPERTHYROIDISM	40	
Au-198	INTRACAVITARY TREATMENT		
Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	INTRACAVITARY TREATMENT		
I-125 or Ir-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELE THERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR	100	
Sn-113/ In-113m	GENERATOR	0	
Tc-99m	REAGENT KITS	100	
Other			

3. DATES AND TOTAL NUMBER OF HOURS RECEIVED IN CLINICAL RADIOISOTOPE TRAINING

7/1/74-6/30/76: 4228 Hours

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:

a. NAME OF SUPERVISOR

Abass Alavi, M.D.

b. NAME OF INSTITUTION

Hosp. of the Univ. of PA

c. MAILING ADDRESS

3400 Spruce St./G1

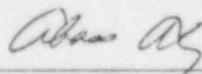
d. CITY

Philadelphia, PA 19104

5. MATERIALS LICENSE NUMBER(S)

37-00118-07

6. PRECEPTOR'S SIGNATURE



7. PRECEPTOR'S NAME (Please type or print)

Abass Alavi, M.D.

8. DATE

April 12, 1985

UNIVERSITY OF PENNSYLVANIA - SCHOOL OF MEDICINE
CURRICULUM VITAE

P. TODD MAKLER, Jr.

Home Address: 960 Meetinghouse Road
Rydal, PA 19046

Office Address: Hospital of the University of Pennsylvania
3400 Spruce Street
1 Donner Center
Philadelphia, PA 19104

Social Security Number: 191-38-0454

Date of Birth: January 8, 1946
Place of Birth: Philadelphia, PA
Marital Status: Married, 1968 - Susan
Children: Christopher, 1974
Jonathan, 1977

Education: 1964-68 B.A. University of Pennsylvania
1968-72 M.D. University of Pennsylvania Medical
School

Postgraduate Training and Fellowship Appointments:

1972-73 Intern in Medicine, Graduate Hospital of
the University of Pennsylvania
1973-76 Resident in Nuclear Medicine, Hospital of
the University of Pennsylvania

Faculty Appointments:

1976- Instructor: Section of Nuclear Medicine,
Temple University Hospital, Philadelphia
1977- Assistant Professor of Radiology, Temple
University Hospital, Philadelphia
1980- Assistant Professor Radiology, University
of Pennsylvania Hospital, Philadelphia
1982- Associate Professor of Radiology,
University of Pennsylvania Hospital,
Philadelphia

Specialty Certification:

1976- American Board of Nuclear Medicine

Licensure: Pennsylvania

Awards, Honors, and Membership in Honorary Societies:

National Merit Scholarship Winner

Memberships in Professional and Scientific Societies:

National Societies:

Society of Nuclear Medicine
American College of Nuclear Physicians
Fellow of the American College of Cardiology
1982-present

American Federation Clinical Research
American Medical Association
Association University Radiologists
American Association Advance of Science

Greater New York Chapter Society of Nuclear Medicine:

Board of Governors - 1983-present
Chairman Education Committee - 1983-present
Member of Bylaws Committee - 1983-present
Member of Membership Committee - 1984-present

Local Societies:

Greater Delaware Valley Nuclear Cardiology Group
(President and Founder, 1980/81-1981/82)
Pa. College of Nuclear Medicine

Non-Professional Achievements:

1966/67 NCAA Individual Fencing Champion (Saber)
1967/68 NCAA Individual Fencing Champion (Saber)
1972 U.S. Olympic Fencing Team (Epee)

Editorial Position:

1983- Reviewer, International Journal of
Cardiology
1983- Reviewer, American Journal of
Cardiology

Publications:

1. Kuhl, D.E., Sanders, T.D., Edwards, R.Q., Makler, P.T.: Failure to Improve Observer Performance with Scan Smoothing. J. Med. Oct. 1972
2. Makler, P. T. Jr., Eymontt, M.J., Bloch, P., Koch, K.: The Effect of Small Amounts of ^{131}I on $^{99\text{m}}\text{Tc}$ Detection by the Gamma Camera. J. Nucl. Med. 17: 1100-1101, 1976
3. Makler, P.T. Jr., Gutowicz, M.F.: Focal Encephalitis Presenting as a Dumbell-Shaped Lesion Crossing Midline. Clinical Nucl. Med. 2: 8-9, 1977
4. Makler, P.T. Jr., Malmud, L.S., Charkes, N.D.: (Case Report) Metastatic Thyroid Carcinoma Presenting as a Hypervascular Neck Lesion. Clinical Nucl. Med. 6: Vol. 6, 192-193, 1977
5. Makler, P.T. Jr., Malmud, L.S., Charkes, N.D.: Diminished Perfusion to an Entire Lung Due to Mucus Plug. Clinical Nucl. Med. 5, Vol. 2, 160-162, 1977
6. Makler, P.T. Jr., Gutowicz, M.F., Kuhl, D.E.: Methotrexate Induced Ventriculitis: Appearance on Routine Radionuclide Scan and Emission Computer Tomography. Clinical Nucl. Med. 1: Vol. 3, 22-23, 1978
7. Charkes, N.D., Makler, P.T. Jr., Philip, C.: Studies of Skeletal Tracer Kinetics. I. Digital Computer Solution of a 5-Compartment Model of ^{18}F -Fluoride Kinetics in Humans. J. Nucl. Med. 19: 1301-09, 1978
8. Tolin, R., Malmud, L.S., Menin, R., Makler, P.T. Jr., Reilley, J. and Fisher, R.S.: Relationship of Gastric to Gallbladder Emptying in Health and Disease. Clin. Res. 26: (3) 327, 1978
9. Tolin, R., Malmud, L.S., Reilley, J., Makler, P.T. Jr., and Fisher, R.S.: Esophageal Clearance in Patients with Esophageal Disorders. Gastroenterology 74: 1105, 1978
10. Makler, P.T. Jr., Charkes, N.D. and Malmud, L.S.: Calculations of Net Uptake Curves Without the Use of a Blood Pool Agent. Eur. J. Nucl. Med. 4 (2): 140, 1979
11. Tolin, R.D., Malmud, L.S., Makler, P.T. Jr., and Fisher, R.S.: Esophageal Clearance in Patients with Esophageal Disorders. Eur. J. Nucl. Med. 4 (2): 140, 1979
12. Malmud, L.S., Tolin, R., Stelzer, F., Makler, P.T. Jr., and Fisher, R.S.: Correlation of Gastric and Gallbladder Emptying by Dual Isotope Scintigraphy. Eur. J. Nucl. Med. 4 (2): 141, 1979

Publications Continued:

13. Tolin, R.D., Malmud, L.S., Stelzer, F., Menin, R., Makler, P.T. Jr., Applegate, G. and Fisher, R.S.: Enterogastric Reflux in Normal Subjects and Patients with Bilroth II Gastroenterostomy. *Gastroenterology* 77: 1027-1033, 1979
14. Makler, P.T. Jr., Lederman, S., Charkes, N.D., Malmud, L.S., Warner H., and Reilley, J.: Myocardial Infarction Imaging with ^{99m}Tc-Pyrophosphate and ^{99m}Tc-Methylenediphosphonate: Lack of Correlation. *Clinical Nucl. Med.* 4: 89-91, 1979
15. Charkes, N.D., Brookes, M. and Makler, P.T. Jr.: Studies of Skeletal Tracer Kinetics: II. Evaluation of a Five-Compartment Model of (¹⁸F) Fluoride Kinetics in Rats. *J. Nucl. Med.* 20: 1150-1157, 1979
16. Charkes, N.D., Brookes, M., Makler, P.T. Jr.: Radiofluoride Kinetics in *Principles of Radiopharmacology*, Vol. 3, L.G. Colombetti, ed., CRC Press Inc. Boca Raton, FL, 1979, pgs 225-242
17. Makler, P.T. Jr., Lewis, E., Cantor, R., Charkes, N.D. and Malmud, L.S.: Nonvisualization of the Left Lobe of the Liver Due to Atrophy or Aplasia. *Clinical Nucl. Med.* 5: 63-65, 1980
18. Makler, P.T. Jr., and Charkes, N.D.: Studies of Skeletal Tracer Kinetics IV. Optimum Time Delay for Tc-^{99m} (Sn) Methylene Diphosphonate Bone Imaging. *J. Nucl. Med.* 21: 641-5, 1980
19. Makler, P.T. Jr., Denenberg, B.S., Malmud, L.S., Charkes, N.D. and Boshko, L.: Evidence for Splenic Sequestration of In-Vivo Labeled Erythrocytes. *J. Clinical Nucl. Med.* 5: 497-498, 1980
20. Makler, P.T. Jr., Lavine, S.J., Deneberg, B.S., Bove, A.A. and Idell, S.: Redistribution on the Thallium Scan in Myocardial Sarcoidosis. *J. Nucl. Med.* 22: 428-432, 1981
21. Charkes, N.D. and Makler, P. T. Jr.: Studies in Skeletal Tracer Kinetics Computer-Simulated Tc-^{99m} (Sn) MDP bone Scan Changes in Some Systematic Disorders. *J. Nucl. Med.* 22: 601-605, 1981
22. Denenberg, B.S., Makler, P.T. Jr., Bove, A.A. and Spann, J.F.: Normal Left Ventricular Emptying in Coronary Artery Disease at Rest: Analysis by Radiographic and Equilibrium Radionuclide Ventriculography. *Am. J. Cardiol.* 48: 311-6, 1981
23. Makler, P.T. Jr., Denenberg, B.S., Bove, A.A., Malmud, L.S. and Spann, J.F.: Point by Point Examination of the Equilibrium Gated Radionuclide Left Ventricular Time Activity Curve: Validation by Biplane Angiography. *Eur. J. Nucl. Med.* 6: 301-307, 1981

Publications Continued:

24. Macoviak, J.A., Stephenson, L.W., Armenti, F., Kelly, A.M., Alavi, A., Makler, P.T. Jr., Cox, J., Palatianos, G. and Edmunds, L.H., Jr.: Electrical Conditioning of in Situ Skeletal Muscle for Replacement of Myocardium. *J. Surg. Res.* 32: 429-439, 1982
25. Makler, P.T. Jr., McCarthy, D.M., Goldstein, H.A., Eymontt, M.J. and Alavi, A.: Incidence of Rapid Resolution of Defects on Stress Thallium Scans. *Clinical Nucl. Med.* 10: 458-461, 1982
26. Makler, P.T. Jr., McCarthy, D.M., Velchik, M.G., Goldstein, H., and Alavi, A.: Fourier Amplitude Ratio: A New Way to Assess Valvular Regurgitation. *J. Nucl. Med.* 24: 204-207, 1983
27. McFarland, T.M., McCarthy, D.M., Makler, P.T. Jr., Josephson, M.E.: Relation Between Site of Origin of Ventricular Tachycardia and Relative Left Ventricular Myocardial Perfusion and Wall Motion. *Am. J. Cardiol.* 51: 1329-33, 1983
28. Makler, P.T. Jr., McCarthy, D.M., London, J.W., Sandler, M.S., Alavi, A.: Fourier Analysis of a Gated Blood-Pool Study During Atrial Flutter. *J. Nucl. Med.* 24: 713-715, 1983
29. Velchik, M.G., Hansell, J., Makler, P.T., Jr., and Alavi, A.: An Unusual Cause of Multiple Splenic Infarcts. *Clinical Nucl. Med.* 8: 444, 1983
30. Makler, P.T. Jr., Velchik, M.G., Weingrad, T., Mandell, G., and Goldstein, H.: Unusual Appearance of a Highly Vascular Lesion on Tc-99m DISIDA Hepatobiliary Scintigraphy. *Clinical Nucl. Med.* 8: 483-6, 1983
31. Charkes, N.D. and Makler, P.T. Jr.: Computer-simulated Radionuclide Bone Scans in Health and Disease Using Compartmental Analysis techniques. Proceedings 1983 Summer Computer Conference July 11-13, 1983, Vancouver, B.C., CANADA
32. Velchik, M.G., Heyman S., Makler, P.T. Jr., Goldstein, H.A., and Alavi, A.: Bone Scintigraphy: Differentiating Benign Cortical Irregularity of the Distal Femur from Malignancy. *J. Nucl. Med.* 25: 72-74, 1984
33. Makler, P.T. Jr., Goldstein, H.A., Velchik, M.G., Sandler, M., and Alavi, A.: Variation of the Spleen-Liver Activity Ratio Due to a Change in Position. *Clinical Nucl. Med.* 9: 85-88, 1984
34. Velchik, M.G., Makler, P.T. Jr., and Alavi, A.: Gallbladder Carcinoma: Another Cause of the Distended Photon-deficient Gallbladder in Cholescintigraphy. *Clinical Nucl. Med.* 9: 137-8, 1984
35. Makler, P.T. Jr., Sherwin, N., McCarthy, D.M. and Alavi, A.:

Detection of Sclerosing Adenosis of the Breast on a Thallium Scan. Clinical Nucl. Med. 9: 277-278, 1984

36. Makler, P.T. Jr., McCarthy, D.M., Kleaveland, J.P., Doherty, J.U., and Velchik, M.G.: Validation of Fourier Amplitude Ratio to Quantitate Valvular Regurgitation. J. Am. Coll. Cardiol. 3(6): 1482-1487, 1984
37. Makler, P.T. Jr., McCarthy, D.M., Bergey, P., Marshall, K., Bourne, M., Velchik, M.G. and Alavi, A.: Multiple-hospital survey of ejection-fraction variability using a cardiac phantom. J. Nucl. Med. 26: 81-84, 1985
38. Noel, A.W., Makler, P.T., Jr., Velchik, M.G. and Yudd, A.P.: Visualization of Arterial Grafts on a Gastrointestinal Bleeding Scan. Clinical Nucl. Med. 10: 19-20, 1985
39. McCarthy, D.M. and Makler, P.T., Jr.: Accuracy of Left Ventricular Ejection Fraction Using the Nuclear Stethoscope in Left Ventricular Aneurysm. Am. J. Cardiol. 55: 177-180, 1985
40. Makler, P.T., Jr., McCarthy, D.M. and Alavi, A.: Early Changes in Thallium Distribution: Effect on Quantitative Analysis. Invest. Radiol. 20: 9-16, 1985
41. Velchik, M.G., Schwartz, W., London, J.W., Makler, P.T., Jr., and Alavi, A.: Quantitative Analysis of Liver Function in Percutaneous Transhepatic Biliary Drainage Patients. Clinical Nucl. Med. 10: 80-85, 1985

Publications (Abstracts)

1. Makler, P.T. Jr., Eymontt, M.J., Arger, P.H., Kuhl, D.E.: Screening for Renal Disease by Radionuclide Detection of Renal Volume Changes: Method and Preliminary Clinical Results. R.S.N.A. Dec., 1975
2. Malmud, L.S., Fisher, R.S., Littlefield, J.L., Rosenberg, R., Dessel, S., Makler, P.T. Jr., Charkes, N.D.: The Mode of Action of Alginic Acid Compound in the Reduction of Gastroesophageal (G-E Reflux Using the G-E Scintiscan). J. Nucl. Med. 19:686, 1978
3. Tolin, R., Malmud, L.S., Menin, R., Makler, P.T. Jr., Reilley, J., and Fisher, R.S.: A New Dual Isotope Technique to Correlate Gall Bladder and Gastric Emptying. J. Nucl. Med. 19: 738-739, 1978
4. Tolin, R., Malmud, L.S., Menin R., Reilley, J., Makler, P.T. Jr., and Fisher, R.S.: Detection and Quantitation of Enterogastric Reflux Following Bilroth II Surgery. J. Nucl. Med. 19: 738-739, 1978
5. Charkes, N.D., Makler, P.T. Jr., Malmud, L.S., Dessel, S., and Reilley, J.: Optimizing Bone Scan Timing by Compartmental Analysis of Skeletal Tracer Kinetics. J. Nucl. Med. 20:614, 1979
6. Stelzer, F., Malmud, L.S., Fisher, R.S., Tolin, R., Menin, R., Makler, P.T. Jr., and Reilley, J.: Quantitative Gastrocholecystoscintigraphy: Comparison of Response to an Oral Meal or I.V. Cholecystokinin (CCK). J. Nucl. Med. 20:621, 1979
7. Malmud, L.S., Fisher, R.S., Stelzer, F., Menin, R., Makler, P.T. Jr., and Applegate, G.: Quantitative Gastro-cholecystoscintigraphy (GCG): Enterogastric Reflux (ERG) in Normal Asymptomatic Subjects and Post-gastrectomy Patients. J. Nucl. Med. 20:632, 1979
8. Boshko, L., Reilley, J., Stern, h., Makler, P.T. Jr., Malmud, L.S., and Charkes, N.D.: Optimization of Red Blood Cell In Vivo Labeling Time in Patients. J. Nucl. Med. Tech. 7: 120, 1979
9. Applegate, G., Reilley, J., Stelzer, F., Makler, P.T. Jr., Fisher, R.S. and Malmud, L.S.: The Technique of Gastrocholecystic Scintigraphy (dual isotope scanning of the upper gastrointestinal tract). J. Nucl. Med. Tech. 7:120, 1979
10. Malmud, L.S., Charkes, N.D., Makler, P.T. Jr., Reilley, J., and Levin, S.: Comparison of I-125 Fibrinogen Uptake Testing (FUT) and Contrast Venography in the Detection of Deep Vein Thrombosis (DVT) in Patients with Hip Surgery or Fracture. J. Nucl. Med. 21:34, 1980

Abstracts Continued:

11. Charkes, N.D., Brookes, M., and Makler, P.T. Jr.: 5
Compartmental Model of F18 Fluoride Kinetics. J. Nucl. Med.
19:688, 1978
12. Sagar, V., Piccone, J.M., Charkes, N.D. and Makler, P.T. Jr.:
Bone Blood Flow & Tracer Uptake. J. Nucl. Med. 19:705, 1978
13. Denenberg, B.S., Makler, P.T. Jr., Bove, A.A., Malmud, L.S.,
Charkes, N.D. and Spann J.: Inability to Detect Coronary Artery
Disease at Rest by Pattern of Ventricular Emptying Using
Contrast Angiography and Radionuclide Angiography. Am J.
Cardiol. 45:409, 1979
14. Soulen, R.E., Makler, P.T. Jr., and Lederman, S.: Comparison of
Non Invasive Techniques for the Detection of Left Ventricular
Asynergy. Abstracts of the Association of University
Radiologists; 1981 pg. 73
15. Makler, P.T. Jr., Denenberg, B.S., Bove A.A., Charkes, N.D.,
Malmud, L.S. and Spann, J.: Validation of the Details of the
Radionuclide Left Ventricular Time Activity Curve. J. Nucl. Med.
pg.9, 1981
16. McCarthy, D.M., Makler, P.T. Jr., Alavi, A. and Kastor, J.A.:
Lack of Clinical Utility of Increased Lung Thallium Uptake in
Predicting Multivessel Coronary Artery Disease. J. Nucl. Med.
pg. 82, 1981
17. Charkes, N.D. and Makler, P.T. Jr.: Computer Simulated Tc99M
Bone Scan Changes in Some Systemic Disorders. J. Nucl. Med. pg.
26, 1981
18. Makler, P.T. Jr., Alavi, A. and McCarthy, D.M.: Incidence of
Rapid Resolution of Stress-Induced Thallium Defects. Clin. Res.
29:654A, 1981
19. McCarthy, D.M., Doherty, J.U., Makler, P.T. Jr., Hess, D.A., and
Kastor, J.A.: Utility of Thallium Myocardial Perfusion Imaging
in Women. Clin. Res. 29:655A, 1981
20. McFarland, T., McCarthy, D.M., Makler, P.T. Jr., Kastor, J.A. and
Josephson, M.E.: Relationship Between Site of Origin of
Ventricular Tachycardia and Relative Myocardial Perfusion and
Wall Motion. Clin. Res. 29:655A, 1981

Abstracts Continued:

21. Makler, P.T. Jr., Denenberg, B.S., Bove, A.A., Charkes, N.D., Malmud, L.S. and Spann, J.F.: Validation of the Details of the Radionuclide Left Ventricular Time Activity Curve in Diastole and Systole. Circ. 64:IV pg. 35, 1981
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Editorials, Reviews, Chapters:

1. Makler, P.T. Jr.: Nuclear Medicine In Urologic Practice (Chapter) in Practice of Surgery. (Ed) Harry S. Goldsmith Harper Harper & Row, Philadelphia, 1981
2. Makler, P.T., Jr., and Osbakken M.D.: Computers in Nuclear Cardiology (Chapter) in Techniques, Diagnostics, and Advances in Nuclear Cardiology. (Ed) Osbakken, Reeves, Flickenger. C.C. Thomas, Springfield, Ill, 1983

Lectures by Invitation:

October 7, 1980	"Thallium Redistribution in Myocardial Sarcoidosis" - Greater New York Chapter Society of Nuclear Medicine, New York
October 15, 1980	"Comparison of the Stress Thallium and Stress Wall Motion Tests" - Greater Delaware Valley Nuclear Cardiology Group, Philadelphia
March 11, 1981	"Comparison of Computers in Nuclear Medicine" - Philadelphia Nuclear Medicine Conference, Philadelphia
April 14, 1981	"Intervention in Nuclear Cardiology" - Greater New York Chapter Society of Nuclear Medicine, New York
June 16, 1981	"Validation of the details of the Radionuclide Left Ventricular Time Activity Curve" - Society of Nuclear Medicine, Las Vegas
October 23, 1981	"Incidence of Rapid Resolution of Stress Induced Thallium Defects" - American Federation of Clinical Research, Boston
October 24, 1981	"Rapid Resolution of Stress Induced Thallium Defects" - Greater New York Chapter Society of Nuclear Medicine, Philadelphia
October 25, 1981	"A New Users Approach to the Nuclear Stethoscope: Selection, Validation, Integration" - Users Symposium, Cherry Hill
November 16, 1981	"Validation of the Details of the Radionuclide Left Ventricular Time Activity Curve in Diastole and Systole" - American Heart Association Meeting, Dallas
April 14, 1982	"New Uses of Computers" - Philadelphia Nuclear Medicine Conference, Philadelphia
June 16, 1982	"Incidence of Rapid Resolution of Stress-Induced Thallium Defects" - Society of Nuclear Medicine, Miami
September 10, 1982	"Thallium Imaging Update" - Greater New York Chapter Society of Nuclear Medicine, New York

Lectures Continued:

September 12, 1982	"Fourier Amplitude Ratio to Assess Aortic Regurgitation by Gated Blood Pool Scan" - Greater New York Chapter Society of Nuclear Medicine, New York
October 8, 1982	"Fourier Amplitude Ratio to Assess Aortic Regurgitation by Gated Blood Pool Scans" - American Federation Clinical Research (Eastern Chapter), Boston
January 13, 1983	"Phase Analysis of Gated Blood Pool Studies" - Memorial Hospital (Sloan Kettering)
March 9, 1983	"Evaluating Valvular Disease" - Philadelphia Nuclear Medicine Conference, Philadelphia
March 21, 1983	"Newer Aspects of Gated Blood Pool Scintigraphy" Nuclear Medicine Update: 1983 (Kiawah Island, SC)
March 21, 1983	"Quantitating Valvular Insufficiency" - Nuclear Medicine Update: 1983 (Kiawah Island, SC)
March 24, 1983	"Fourier Ventricular Amplitude Ratio to Assess Valvular Regurgitation by Gated Blood Pool Scan" Am Col Cardiol - (New Orleans)
March 26, 1983	"Assessment of Valvular Insufficiency Spring Symposium": GNY Chapter SNM (Atlantic City)
March 26, 1983	"Technique of Tl Imaging - Role of Image Enhancement and Quantification" Spring Symposium: GNY Chapter SNM: (Atlantic City)
May 21, 1983	"Image Analysis" Pennsylvania College of Nuclear Medicine, Hershey
June 8, 1983	"Fourier Ventricular Amplitude Ratio to Assess Valvular Regurgitation by Gated Blood Pool Scan" - Society of Nuclear Medicine, St. Louis
June 9, 1983	"Sources of Variability in Thallium Circumferential Profile Curve Analysis" - Society of Nuclear Medicine, St. Louis
June 9, 1983	"Early Changes in Thallium Distribution: Effect on Scan Quantitation" - Society of Nuclear Medicine, St. Louis
December 14, 1983	"Newer Aspects of Thallium Imaging" - Philadelphia Nuclear Medicine Conference, Philadelphia

May 1, 1984	"Computers I" - Nuclear Medicine Update: 1984, Orlando
May 2, 1984	"Computers II" - Nuclear Medicine Update: 1984, Orlando
May 2, 1984	"Update on Lung Scanning" - Nuclear Medicine Update: 1984, Orlando
May 5, 1984	"Phase Analysis" - Temple University Hospital: Technologist Refresher Course, Philadelphia
Oct 19, 1984	"Evaluation of Atrial Septal Defect by Fourier Ventricular Amplitude Ratio"- Am Fed Clin Res Eastern Regional Meeting- Phila
Oct. 20, 1984	"Quantitative Evaluation of Thallium - Help or Hinderance" - Greater New York Chapter, Society of Nuclear Medicine, Phila
Jan. 9, 1985	"Bone Densitometry" Philadelphia Nuclear Medicine Conference.
Jan. 14, 1985	"Evaluation of Valvular Insufficiency" West Reading Hospital

Major Teaching and Clinical Responsibilities at the University of Pennsylvania:

Conference (Bi-monthly) for Radiology Residents at Temple University (1976-1980)

Lecturer at Radiology 210 Course at HUP (1977-present)

Teaching Responsibility in Radiology 300 Course at HUP (1981-present)

Local Committees:

Radiology Audit Committee - 1982
HUP Stand-by Radiation Safety Committee - 1982
Radiation Emergency Co-ordinating Committee of HUP

Member Of:

Advisory Board of the Gwynedd Mercy College School of Nuclear
Medicine Technology - 1982

Chairman, Program Committee, Pennsylvania College of Nuclear
Medicine - 1982-83

BETWEEN: William O. Miller, Chief
License Fee Management Branch
Office of Administration -

John E. Glenn, Chief
Nuclear Materials Section B
Division of Engineering and
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: Elkins Park Radiology Associates

Application Dated: 5/14/85

Control No.: 03884

License No.: 37-20727-01

2. FEE ATTACHED

Amount: \$ 120.00

Check No.: 1182

3. COMMENTS

Signed Brenda Platchek

Date 5/30/85

02200

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 7C - \$120

9/89

2. Correct Fee Paid. Application may be processed for:

Amendment

Renewal

License

Signed Jo Jackson

Date 6/17/85

