



May 22, 1986

In Reply Refer To: 512/00

Director, Material Licensing Branch
U.S. Nuclear Regulatory Commission
Washington, DC 20555

License No.: 19-01058-01

THRU: Director, Nuclear Medicine Service (115)

Dear Sir:

We request the below listed amendments to the Baltimore VA Medical Center's U.S Nuclear Regulatory Commission Material License #19-01058-01, expiration date, March 31, 1990.

1. The following individuals be approved as authorized users for the materials and uses as indicated. Completed NRC Form 313M, Supplement A, delineating their training and experience are enclosed.

- John A. Bilello, Ph.D. - Licensed material of the types, quantities and forms specified in Section 31.11(a) of 10CFR31 for use in accordance with the provisions of paragraph (a), (c) and (d) of Section 31.11, 10CFR31
- In vitro use of Sulfur 35, Hydrogen 3, Phosphorus 32, Rubidium 86 and Chromium 51, Iodine 125
- Herbert E. Gladen, M.D. - Use of Cobalt 57 in laboratory animals *(cyclophosphamide-produced)*
- Paul M. Hoffman, M.D. - In vitro use of Sulfur 35, Hydrogen 3, Phosphorus 32, Rubidium 86, Chromium 51, Iodine 125 and Carbon 14
- Licensed material of the types, quantities and forms specified in Section 31.11(a) of 10CFR31 for use in accordance with the provisions and paragraphs (a), (c), and (d) of Section 31.11 10CFR31
- David E. Johnson, Ph.D. - Licensed material of the types, quantities and forms specified in Section 31.11(a) of 10CFR31 for use in accordance with the provisions of paragraph (a), (c), and (d) of Section 31.11 10CFR31

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19-01058-01 PDR

"OFFICIAL RECORD COPY"

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Director, Material Licensing Branch

May 22, 1986

2. Changes or additions of the maximum amount of the indicated byproduct, service and/or special nuclear material this medical center may possess at any one time:

Iodine 125	4 Millicuries
Sulfur 35	10 Millicuries
Carbon 14	15 Millicuries
Hydrogen 3	50 Millicuries
Phosphorus 32	10 Millicuries
Rubidium 86	2 Millicuries
Chromium 51	5 Millicuries
Cobalt 57	5 Millicuries <i>3 VACO -</i>
Any byproduct material in Section 31.11(a) of 10CFR31	From 3 to 8 Millicuries of each listed byproduct material authorized

We would be happy to provide any additional information or answer any questions pertaining to the items in this amendment application.

Sincerely yours,

James A. Christian
JAMES A. CHRISTIAN
Medical Center Director

Enclosures

cc:
Research Service (151)

James W. Fletcher
JAMES W. FLETCHER, M.D.
Director, Nuclear Medicine Service (115)
Veterans Administration
Washington, DC 20420

*excluding Cobalt 57
per letter
to Baltimore
VAMC (oo)
attached*

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

John A. Bilello, Ph.D.

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

N/A

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
N/A	N/A	N/A

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	Albert Einstein Coll. Med. NY Johns Hopkins Oncology Ctr. Univ. of MD School of Medicine		4 years 3 years 3 years
b. RADIATION PROTECTION	Univ. of MD School of Medicine	8 hrs.	3 years
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	Albert Einstein Coll Med. NY Johns Hopkins Oncology Center Univ. of MD School of Medicine		4 years 3 years 3 years
d. RADIATION BIOLOGY	Univ. of MD School of Medicine	8 hrs.	3 years
e. RADIOPHARMACEUTICAL CHEMISTRY	N/A		

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
¹²⁵ I	5 mCi	Albert Einstein Coll. of Med. Johns Hopkins Oncology Univ. of Md. Sch. of Med.	4 years 3 years 3 years	protein iodination protein iodination protein iodination
³² P	5 mCi	Johns Hopkins University	3 years	nucleic acid label
³⁵ S	5 mCi	A. Einstein Coll. of Med, JHU, Univ. of MD	10 years	protn. phosphorylate protein labeling
⁸⁶ Rb	5 mCi	JHU	3 years	K ⁺ transport
³ H	5 mCi	JHU, AECOM, UMB	10 years	transport, enzyme assay

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

John A. Bilello, Ph.D.

STREET ADDRESS

Veterans Administration Medical Center
3900 Loch Raven Boulevard

CITY

Baltimore

STATE

MD

ZIP CODE

21218

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		
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES	> 100	
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING		
	CARDIAC IMAGING		
	THYROID IMAGING		
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING		
	LUNG IMAGING		
OTHER	BONE IMAGING		

PRECEPTOR 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		
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
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		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other 32P 35S 86Rb + 3H 14C	In vitro studies	> 100	

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

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

a. NAME OF SUPERVISOR

J. Thomas August

b. NAME OF INSTITUTION

AECOM

c. MAILING ADDRESS

1300 Morris Pk. Ave.

d. CITY

Bronx, New York 10468

5. MATERIALS LICENSE NUMBER(S)

Unknown

6. PRECEPTOR'S SIGNATURE



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

Frank L. Iber, M.D.

8. DATE

5-6-86

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER Herbert E. Gladen, M.D.	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE MD
---	---

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C

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	University of Minnesota, Minneapolis, MN B. Physics, 1976	>200	>100
b. RADIATION PROTECTION	U.S.A.F. Radiologic Monitor Course, 1968 Tyndall AFB, Panama City, FL	20	50
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	University of Minnesota Minneapolis, MN	>200	
d. RADIATION BIOLOGY	U.S.A.F. Radiologic Monitor Course, 1968 Tyndall AFB, Panama City	20	
e. RADIOPHARMACEUTICAL CHEMISTRY	Mayo Graduate School of Medicine, Rochester, MN 1979		>30

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
^3H ^{14}C	1 mCi	Mayo Graduate School Medicine, Rochester, MN	1½ years	Radiolabeled non-absorbable marker for GI research in animals

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		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.
FULL NAME		
Herbert E. Gladen		
STREET ADDRESS		
229 Treherne Road		
CITY	STATE	ZIP CODE
Timonium	MD	21093

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		
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING		
	CARDIAC IMAGING		
	THYROID IMAGING		
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING		
	LUNG IMAGING		
	BONE IMAGING		
OTHER			

PRECEPTOR 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		Animal research
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
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		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other ³ H ¹⁴ C	Non-absorbable radiolabeled gastrointestinal marker	50 canines	

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

1979-1980 Approximately 200 hours of supervised use in animal research facility

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

a. NAME OF SUPERVISOR

Keith Kelly, M.D.

b. NAME OF INSTITUTION

Mayo Foundation

c. MAILING ADDRESS

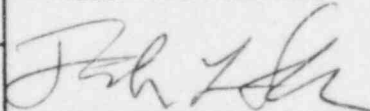
d. CITY

Rochester, MN

5. MATERIALS LICENSE NUMBER(S)

Unknown

6. PRECEPTOR'S SIGNATURE



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

Frank L. Iber, M.D.

8. DATE

5-6-86

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

Paul M. Hoffman, M.D.

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

MD

3. CERTIFICATION

SPECIALTY BOARD
ACATEGORY
BMONTH AND YEAR CERTIFIED
C

Neurology

6/78

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING
ALOCATION AND DATE(S) OF TRAINING
B

TYPE AND LENGTH OF TRAINING

LECTURE/
LABORATORY
COURSES
(Hours)
CSUPERVISED
LABORATORY
EXPERIENCE
(Hours)
Da. RADIATION PHYSICS AND
INSTRUMENTATION

b. RADIATION PROTECTION

c. MATHEMATICS PERTAINING TO
THE USE AND MEASUREMENT
OF RADIOACTIVITY

d. RADIATION BIOLOGY

e. RADIOPHARMACEUTICAL
CHEMISTRYNINCDS, NIH, Bethesda, MD
1977-1978

3

100

NINCDS, NIH, Bethesda, MD
1977-1978

3

100

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
^{125}I	5000 mCi	NCI, NIH, Bethesda	3 months	Radioimmunoassay
^{51}Cr		NIHID, NIH, Bethesda	2 months	Cytotoxicity assay
^3H		VAMC, Charleston, SC	2 years	Biological-cell culture

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

Paul M. Hoffman, M.D.

STREET ADDRESS

Veterans Administration Medical Center
3900 Loch Raven Boulevard

CITY

Baltimore

STATE

MD

ZIP CODE

21218

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		
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES	> 100	
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING		
	CARDIAC IMAGING		
	THYROID IMAGING		
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING		
	LUNG IMAGING		
	BONE IMAGING		
OTHER			

PRECEPTOR 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		
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
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	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other 3H 51Cr	Cell culture Cytotoxicity	> 100 > 100	

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

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

a. NAME OF SUPERVISOR

D.C. Gajdusek, M.D.

b. NAME OF INSTITUTION

NINCDS, NIH

c. MAILING ADDRESS

9000 Rockville Pike

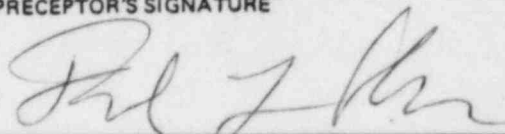
d. CITY

Bethesda, MD

5. MATERIALS LICENSE NUMBER(S)

Unknown

6. PRECEPTOR'S SIGNATURE



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

Frank L. Iber, M.D.

8. DATE

5-6-86

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

David E. Johnson, Ph.D.

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE N/A

3. CERTIFICATION

SPECIALTY BOARD
ACATEGORY
BMONTH AND YEAR CERTIFIED
C

N/A

N/A

N/A

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING
ALOCATION AND DATE(S) OF TRAINING
B

TYPE AND LENGTH OF TRAINING

LECTURE/
LABORATORY
COURSES
(Hours)
CSUPERVISED
LABORATORY
EXPERIENCE
(Hours)
Da. RADIATION PHYSICS AND
INSTRUMENTATIONGraduate School, University of
Maryland at Baltimore
1963-1971

b. RADIATION PROTECTION

Same

c. MATHEMATICS PERTAINING TO
THE USE AND MEASUREMENT
OF RADIOACTIVITY

Same

8 hr

> 100 hr

d. RADIATION BIOLOGY

Same

e. RADIOPHARMACEUTICAL
CHEMISTRY

Same

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
^{125}I	5 mCi	University of Maryland at Baltimore	1963-1971	In vitro assays
^3H	5 mCi	University of Maryland at Baltimore	1963-1971	In vitro assays

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

David E. Johnson, Ph.D.

STREET ADDRESS

Veterans Administration Medical Center
3900 Loch Raven Boulevard

CITY

Baltimore

STATE

MD

ZIP CODE

21218

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		RIA test kits using ¹²⁵ I
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES	> 100	
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING		
	CARDIAC IMAGING		
	THYROID IMAGING		
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING		
	LUNG IMAGING		
OTHER			
	BONE IMAGING		

PRECEPTOR 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 (Soft beta)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Calcitriol)	INTRACAVITARY TREATMENT		
I-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
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	TELETHERAPY TREATMENT		
Si-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other ³ H	In vitro studies	> 50	Radioactive labeling of bacteria with ³ H

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

N/A

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

a. NAME OF SUPERVISOR

Donald Shay, Ph.D. (now retired)

b. NAME OF INSTITUTION

University of MD at Baltimore

c. MAILING ADDRESS

3900 Loch Raven Boulevard

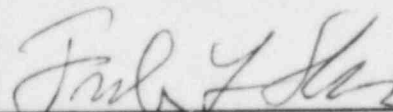
d. CITY

Baltimore

5. MATERIALS LICENSE NUMBER(S)

Unknown

6. PRECEPTOR'S SIGNATURE



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

Frank L. Iber, M.D.

8. DATE

5-6-86