Medical Center

3900 Loch Raven Blvd. Baltimore MD 21218

Veterans Administration

May 22, 1986

In Reply Refer To: 512/00

Director, Material Licensing Branch U.S. Nuclear Regulatory Commission License No.: 19-01058-01 Washington, DC 20555

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. Ccmpleted NRC Form 313M, Supplement A, delineating their training and experience are enclosed.

John A. Bilello, Ph.D.

Licensed material of the types, quantitites 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.

Paul M. Hcffman, M.D.

8608200363 860807 REG1 LIC30 19-01058-01 PDI

PDR

- 6.

use of Cobalt 57 in laboratory animals (cyclo from - produced)

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, quantitites 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

"OFFICIAL RECORD COP

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 3 VACO -
Any byproduct material	From 3 to 8 Millicuries of each listed
in Section	byproduct material authorized
31.11(a) of 10CFR31	영양이 다 가지, 이번 아파, 그 것 것 같아 다니, 다 그 것 같아?

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

Sincerely yours,

ruster

JAMES A. CHRISTIAN Medical Center Director

Enclosures

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cc: Research Service (151)

JAMES W. FLETCHER, M.D. Director, Nuclear Medicine Service (115) Veterans Administration Director, Nuclear Medicine Service (115) Veterans Administration Director, Nuclear Medicine Service (115) Veterans Administration

Washington, DC 20420

18C FORM :	313M SUPPLEMENT A	TR	RAINING AND EXPERIENCER OR RADIATION SAFE	ICE		ATORY COMMISSION	
I. NAME OF	AUTHORIZED USER OR F	RADIATIC	N SAFETY OFFICER			TERRITORY IN CENSED TO	
John A	A. Bilello, Ph.D.	PRACTICE					
			3. CERTIFICATION				
	SPECIALTY BOARD		CATEGORY		MONTH AND	D YEAR CERTIFIED	
N/A			N/A		N/A		
	4. TRAINING	G RECEIN	VED IN BASIC RADIOISOTOPE	HANDLING T	ECHNIQUES		
					TYPE AND LE	ENGTH OF TRAINING	
FIELD OF TRAINING			LOCATION AND DATE (S) C	LOCATION AND DATE (S) OF TRAINING B		E/ SUPERVISED LABORATORY S EXPERIENCE (Hours) D	
			Albert Einstein Coll			4 years	
a RAC	DIATION PHYSICS AND		Johns Hopkins Oncolog			3 years	
	TRUMENTATION		Univ. of MD School of	f Medicine		3 years	
b. RADIATION PROTECTION		Univ. of MD School of	f Medicine	8 hrs	s. 3 years		
			Albert Einstein Coll			4 years	
	THEMATICS PERTAINING		Johns Hopkins Oncolog			3 years	
	E USE AND MEASUREMEN RADIOACTIVITY	т	Univ. of MD School of	f Medicine		3 years	
d. RAC	DIATION BIOLOGY		Univ. of MD School of	f Medicine	8 hrs	s. 3 years	
e. RADIOPHARMACEUTICAL			N/A	N/A			
	5. EXPERIENC	EWITH	RADIATION. (Actual use of Rad	dioisotopes or Eq	juivalent Expe	rience)	
ISOTOPE	MAXIMUM AMOUNT	WHEP	RE EXPERIENCE WAS GAINED	DURATION OF	EXPERIENCE	TYPE OF USE	
125 _I	5 mCi	Al'ber	t Einstein Coll. of Me	. 4 year	rs	protein iodinat	
2233		Johns	Hopkins Oncology	3 year	irs	protein iodinat	
32p		Univ.	of Md. Sch. of Med.	3 year	irs	protein iodinat	
	5 mCi	Johns	Hopkins University	· 3 year		nucleic acid la	
35 _S	5 mCi	A EI	tota Call of Mad	10 100		protn. phosphor protein labelin	
	J mor		nstein Coll. of Med, Univ. of MD	10 year	rs	protein labelli	
86 _{Rb} 3 _H	5 mCi	JHU, U	ASLYS OL THE	3 year	rs	K transport	
3	5 mCi		AECOM, UMAB	10 year	irs	transport, enzy	

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NRC FOR	M 313M SUPPLEMENT B	2.12		J. S. NUCLEAR REGULATORY COMMISSION
(9-81)			1	a contra a contra a contra a
	PRECE	PTOR STA	TEME	NT
Supplement	nt B must be completed by the applicant phy , obtain a separate statement from each.	sician's prece	otor. If	more than one preceptor is necessary to document
APPLIC	ANT PHYSICIAN'S NAME AND ADDRESS			KEY TO COLUMN C
John	AME A. Bilello, Ph.D.		upervised	SONAL PARTICIPATION SHOULD CONSIST OF: d examination of patients to determine the suitability for pe diagnosis and/or treatment and recommendation for dosage.
Vete	radoress rans Administration Medical Ce Loch Raven Boulevard	inter t	o the pat	ion in dose calibration and actual administration of dose ient including calculation of the radiation dose, related ents and plotting of data.
CITY Balt		210		period of training to enable physician to manage radioactive nd follow patients through diagnosis and/or course of
	2. CLINICAL TRAINING AND	EXPERIENC	E OF A	BOVE NAMED PHYSICIAN
ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER CASES INVO PERSON PARTICIPA C	LVING	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
	DIAGNOSIS OF THYROID FUNCTION			
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME			
1-131	LIVER FUNCTION STUDIES			
or 1-125	FAT ABSORPTION STUDIES			
	KIDNEY FUNCTION STUDIES			
	IN VITRO STUDIES	> 100		
OTHER				
1-125	DETECTION OF THROMBOSIS			
1-131	THYROID IMAGING			
P-32	EYE TUMOR LOCALIZATION			
Se-75	PANCREAS IMAGING			
Yb-169	CISTERNOGRAPHY			
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES			
OTHER		10000		
	BRAIN IMAGING			
С.,	CARDIAC IMAGING			
	THYROID IMAGING			
	SALIVARY GLAND IMAGING			
Tc-99m	BLOOD POOL IMAGING			
	PLACENTA LOCALIZATION	¥		
	LIVER AND SPLEEN IMAGING			
	LUNG IMAGING			
	BONE IMAGING			
		+		

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OTHER

:	2. CLINICAL TRAINING AND EXI	PERIENCE OF AB	SOVE NAMED PHYSICIAN (Continued)
ISOTOPE	CONDITIONS DIAGNOSED OR TREATED		IG COMMENTS (Additional information or comments may be
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
1-131	TREATMENT OF THY ROID CARCINOMA		
1-131	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60 or	INTERSTITIAL TREATMENT		
Cs-137	INTRACAVITARY TREATMENT		 A state of the sta
I-125 or Ir-192 Co-60	INTERSTITIAL TREATMENT		
or Cs-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE		
1.00	RADIOPHARMACEUTICAL PREPARATION		
Mc-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR	(Sectory 19)	
Tc-99m	REAGENT KITS		
32 p 35 s 86 s 3H 14C	H		
4. THE T	AND TOTAL NUMBER OF HOURS RECE	ABOVE 6. PREC	AL RADIOISOTOPE TRAINING
	BTAINED UNDER THE SUPERVISION OF	·	F. 111
J.	Thomas August	18	nd I shen
	E OF INSTITUTION	7. PREC	CEPTOR'S NAME (Please type or print)
130	00 Morris Pk. Ave.		rank L. Iber, M.C.
d City	onx, New York 10468	8. DATE	
Bro			
	TALS LICENSE NUMBER(S)		5-6-86

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NÁC FORM (9-81)	313M SUPPLEMENT	TF	RAINING AND EXPERIEN	NCE		FORY COMMISSION
	AUTHORIZED USER OR E. Gladen, M.D.	2. STATE OR T WHICH LICE PRACTICE M	NSED TO			
_			3. CERTIFICATION		1	
	SPECIALTY BOARD		CATEGORY	, 	MONTH AND	YEAR CERTIFIED
	4. TRAINING	RECEIV	ED IN BASIC RADIOISOTOP	E HANDLING T	ECHNIQUES	
			1		TYPE AND LEN	GTH OF TRAINING
FIELD OF TRAINING		LOCATION AND DATE (S) B	LECTURE/ LABORATORY COURSES (Hours) C	Y LABORATORY EXPERIENCE (Hours) D		
	TATION PHYSICS AND		University of Minnesota, Minneapolis, MN B. Physics, 1976		>200	7100
b. RADIATION PROTECTION		U.S.A.F. Radiologic Course, 1968 Tyndall AFB, Panama	20	50		
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY			University of Minnes Minneapolis, MN	>200		
d. RAC	DIATION BIOLOGY	U.S.A.F. Radiol Course, 1968 Tyndall AFB, Par			20	
	DIOPHARMACEUTICAL		Mayo Graduate School Medicine, Rochester 1979			> 30
	5. EXPERIENC	E WITH R	ADIATION. (Actual use of Ra	dioisotopes or Ed	quivalent Experie	ence)
ISOTOPE	MAXIMUM AMOUNT	WHER	E EXPERIENCE WAS GAINED	DURATION OF	EXPERIENCE	TYPE OF USE
³ _H ¹⁴ C	l mC		Graduate School ine, Rochester, MN	1½ y		Radiolabeled non-absorbabl marker for GI research i animals

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NRC FORM (9-81)	313M SUPPLEMENT B	EPTOR ST	1000	J. S. NUCLEAR REGULATORY COMMISSION
Supplemen	t B must be completed by the applicant phy obtain a separate statement from each.	ysician's prece	eptor. If	more than one preceptor is necessary to document
	ANT PHYSICIAN'S NAME AND ADDRESS			KEY TO COLUMN C SONAL PARTICIPATION SHOULD CONSIST OF: d examination of patients to determine the suitability for
	ert E. Gladen		radioisoto prescribed	pe diagnosis and/or treatment and recommendation for I dosage.
	Treherne Road		to the pati	tion in dose calibration and actual administration of dose ient including calculation of the radiation dose, related ents and plotting of data.
CITY Timo		CODE 3	Adequate patients an treatment	period of training to enable physician to manage radioactive nd follow patients through diagnosis and/or course of
	2. CLINICAL TRAINING AND	DEXPERIEN	ICE OF A	ABOVE NAMED PHYSICIAN
ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBEI CASES INVO PERSON PARTICIP C	OLVING	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D
	DIAGNOSIS OF THYROID FUNCTION			
	BLOOD PLASMA VOLUME			
1-131 or	LIVER FUNCTION STUDIES			
1-125	FAT ABSORPTION STUDIES			
	KIDNEY FUNCTION STUDIES			
	IN VITRO STUDIES			
OTHER				
1-125	DETECTION OF THROMBOSIS			
1-131	THYROID IMAGING			
P-32	EYE TIJMOR LOCALIZATION			
Se- 75	PANCREAS IMAGING			
Yb-169	CISTE RNOGRAPHY			
Xe-133	BLOCD FLOW STUDIES AND PULMONARY FUNCTION STUDIES			
OTHER				
	BRAIN IMAGING			
	CARDIAC IMAGING			
	THYROID IMAGIN'S			
	SALIVARY GLAND IMAGING			
Tc-99m	BLOOD POOL IMAGING		- Provide P	
	PLACENTA LOCALIZATION			
	LIVER AND SPLEEN IMAGING			
	LUNG IMAGING			
	BONE IMAGING			
OTHER				

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		R STATEMENT	
	2 CLINICAL TRAINING AND EXP		VE NAMED PHYSICIAN (Continued)
ISOTOPE A	CONDITIONS DIAGNOSED OR TREATED	PARTICIPATION	
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colloidal)	INTRACAVITARY TREATMENT		
1-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au- 198	INTRACAVITARY TREATMENT	5-16-5-6-6	
Co-60 or	INTERSTITIAL TREATMENT		
Cs-137	INTRACAVITARY TREATMENT		
I-125 or Ir-192 Co-60	INTERSTITIAL TREATMENT		
or Cs-137	TELETHERAPY TREATMENT	and stores in	
Sr-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
^{g ther} H ¹⁴ C	Non-absorbable radiolabeled gastrointestinal marker	50 canines	Animal research
B DATES 1979-1	AND TOTAL NUMBER OF HOURS RECE 980 Approximately 200 hours o		RADIOISOTOPE TRAINING use in animal research facility
	RAINING AND EXPERIENCE INDICATED BTAINED UNDER THE SUPERVISION OF	ADUVE	PTOR'S SIGNATURE
	E OF SUPERVISOR Kelly, M.D.	15	6 LAI
	E OF INSTITUTION		
	Foundation	7. PRECE	PTOR'S NAME Please type or print
	ING ADDRESS	Fr	ank L. Iber, M.D.
d CITY		8. DATE	
Roche	ster, MN	O. DATE	
5. MATER	ALS LICENSE NUMBER(S)		
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H81)	AUTHORIZ	TR	AINING AND EXPERIEN	TY OFFICE			
NAME OF	AUTHORIZED USER OR R	ADIATION	SAFETY OFFICER		2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE		
Paul M. H	al M. Hoffman, M.D. 3. CERTIFICATION						
	SPECIALTY BOARD		CATEGORY		MONTH AND	YEAR CERTIFIED	
Neurology					(5/78	
	4. TRAINING	RECEIV	ED IN BASIC RADIOISOTOP	E HANDLING 1	TECHNIQUES		
					TYPE AND LE	INGTH OF TRAINING	
FIELD OF TRAINING		LOCATION AND DATE (S)	LECTURE LABORATOL COURSES (Hours) C	LABORATORY EXPERIENCE			
	IATION PHYSICS AND RUMENTATION						
6. RADIATION PROTECTION		NINCDS, NIH, Bethes 1977-1978	3	100			
THE	THEMATICS PERTAINING E USE AND MEASUREMEN RADIOACTIVITY						
d. RAC	DIATION BIOLOGY		NINCDS, NIH, Bethesda, MD 1977-1978		3	100	
•. RA	DIOPHARMACEUTICAL EMISTRY						
	5. EXPERIENCE		ADIATION. (Actual use of Ra				
ISOTOPE	MAXIMUM AMOUNT		E EXPERIENCE WAS GAINED		FEXPERIENCE	TYPE OF USE	
¹²⁵ I ⁵¹ Cr	5000 mCi		NIH, Bethesda D, NIH, Bethesda	3 month 2 month		Radioimmunoassa Cytotoxicity as	
3 _H		VAMC	, Charleston, SC	· 2 years	5	Biological-cell culture	

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NRC FORM 313M SUPPLEMENT B

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U. S. NUCLEAR REGULATORY COMMISSION

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PRECEPTOR STATEMENT

Supplemen experience,	t B must be completed by the applicant phy obtain a separate statement from each.	rsician's p	receptor. If	more than one preceptor is necessary to document		
1. APPLICA	NT 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			
Veter	ADDRESS ans Administration Medical Cen Loch Raven Boulevard	nter	to the pat measurem	tion in dose calibration and actual administration of dose ient including calculation of the radiation dose, related ients and plotting of data.		
CITY Balti		CODE 1218	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	EXPER	ENCE OF A	BOVE NAMED PHYSICIAN		
ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	CASES I PER PARTI	IBER OF NVOLVING SONAL CIPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D		
	DIAGNOSIS OF THYROID FUNCTION					
	DE TE RMINATION OF BLOOD AND BLOOD PLASMA VOLUME					
1-131	LIVER FUNCTION STUDIES					
or 1-125	FAT ABSORPTION STUDIES					
	KIDNEY FUNCTION STUDIES					
	IN VITRO STUDIES	> 1	00			
OTHER	a sinter a sign age with got the spec					
1-125	DETECTION OF THROMBOSIS					
1-131	THYROID IMAGING					
P-32	EYE TUMOR LOCALIZATION					
Se-75	PANCREAS IMAGING					
Yb-169	CISTERNOGRAPHY					
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES					
OTHER						
	BRAIN IMAGING					
	CARDIAC IMAGING					
	THYROID IMAGING					
	SALIVARY GLAND IMAGING					
Tc-99m	BLOOD POOL IMAGING					
	PLACENTA LOCALIZATION					
	LIVER AND SPLEEN IMAGING					
	LUNG IMAGING					
	BONE IMAGING					
OTHER						

	2 CLINICAL TRAINING AND EXI	PERIENCE OF	BOVE NAMED PHUSICIAN (Continued)
SOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLV PERSONAL PARTICIPATIC C	ING COMMENTS (Aduitional information or comments may be
F-32 Saluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	Constanting of the	
P-32 (olioidal)	INTRACAVITARY TREATMENT		
1-131	TREATMENT OF THYROID CARCINOMA		
1-131	TREATMENT OF HYPERTHYROIDISM		
Au- 198	INTRACAVITARY TREATMENT		
0-60	INTERSTITIAL TREATMENT		
or 3+137	INTRACAVITARY TREATMENT	i e se alter	
I-125 or r-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE	1	
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other 3 _H			
51 _{Cr}	Cell culture Cytotoxicity	> 100	
4. THE T	SAND TOTAL NUMBER OF HOURS RECO	DABOVE 6. PF	ECEPTOR'S SIGNATURE
	BTAINED UNDER THE SUPERVISION OF	F:	HO 1 th
	C. Gajdusek, M.D.		on frin
	ME OF INSTITUTION NCDS, NIH	7. PF	ECEPTOR'S NAME Please type or print)
	LING ADDRESS		Frank L. Iber, M.D.
	00 Rockville Pike	and the second se	
900		8. 0/	TE

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9-81)	AUTHOR	ZED US	AINING AND EXPERIEN	ICE ETY OFFICER				
NAME OF	UTHORIZED USER OR	RADIATIO	N SAFETY OFFICER		2. STATE OR TERRITORY IN WHICH LICENSED TO			
David E.	Johnson, Ph.D.	PRACTICE ME	DICINE N/A					
			3. CERTIFICATION					
	SPECIALTY BOARD		CATEGORY		MONTH AND Y	C		
N/A		N/A		N,	/A			
	4. TRAININ	G RECEIV	ED IN BASIC RADIOISOTOP	E HANDLING TE	CHNIQUES			
					TYPE AND LENG	TH OF TRAINING		
FIELD OF TRAINING		LOCATION AND DATE (S)	LECTURE/ LABORATORY COURSES (Hours) C	SUPERVISED LABORATORY EXPERIENCE (Hours) D				
A. RADIATION PHYSICS AND		Graduate School, Uni Maryland at Baltimor 1963-1971	1					
b. RAD	ATION PROTECTION		Same	/				
THE	HEMATICS PERTAININ USE AND MEASUREME RADIOACTIVITY		Same	}	8 hr	>100 hr		
d. RADIATION BIOLOGY		Same						
. RAI	DIOPHARMACEUTICAL MISTRY		Same)	/			
	5. EXPERIEN		RADIATION. (Actual use of Ra	the second se	sectoreduced to the A. Incomparison	Standing of the barrier of the second state of the second state of the second state of the second state of the		
ISOTOPE	MAXIMUM AMOUNT	WHEF	RE EXPERIENCE WAS GAINED	DURATION OF	EXPERIENCE	TYPE OF USE		
125 _I	5 mCi		Jniversity of Maryland 1963-1 at Baltimore		71	In vitro ass		
З _Н	5 mCi		rsity of Maryland ltimore	1963-19	71	In vitro ass		

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NRC FORM 313M SUPPLEMENT B

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U. S. NUCLEAR REGULATORY COMMISSION

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PRECEPTOR STATEMENT

xperience,	t B must be completed by the applicant phy obtain a separate statement from each.	rsician's pre	eceptor. In	f more than one preceptor is necessary to document			
APPLICA	NT PHYSICIAN'S NAME AND ADDRESS		KEY TO COLUMN C				
FULL NA David	ME E. Johnson, Ph.D.		PERSONAL PARTICIPATION SHOULD CONSIST OF: 1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for prescribed dosige.				
Vetera	ADDRESS ns Administration Medical Cen och Raven Boulevard	nter	to the parmeasurem	ition in dose calibration and actual administration of dose tient including calculation of the radiation dose, related ments and plotting of data.			
CITY	STATE ZIP	CODE		e period of training to enable physician to manage radioactiv and follow patients through diagnosis and/or course of			
Baltim	ore MD 2	1218	treatmen	t.			
	2. CLINICAL TRAINING AND	DEXPERIE	ENCE OF	ABOVE NAMED PHYSICIAN			
ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	CASES IN	IER OF VOLVING ONAL IPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets.) D			
	DIAGNOSIS OF THY ROLD FUNCTION						
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME						
1-131	LIVER FUNCTION STUDIES						
or 1-125	FAT ABSORPTION STUDIES						
	KIDNEY FUNCTION STUDIES						
	IN VITRO STUDIES	> 1	00	RIA test kits using ¹²⁵ I			
OTHER							
1-125	DETECTION OF THROMBOSIS						
1-131	THYROID IMAGING						
P-32	EYE TUMOR LOCALIZATION						
Se- 75	PANCREAS IMAGING						
Yb-169	CISTE RNOGRAPHY						
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES						
OTHER	Sector And Sector And						
	BRAIN IMAGING						
	CARDIAC IMAGING						
	THYROID IMAGING						
	SALIVARY GLAND IMAGING						
Tc-99m	BLOOD POOL IMAGING		N-1 11 1988-1				
	PLACENTA LOCALIZATION						
	LIVER AND SPLEEN IMAGING						
	LUNG IMAGING						
	BONE IMAGING						
OTHER							

NRC FORM 313M SUPPLEMENT 8 (9-81)

	2 CLINICAL TRAINING AND EXP	ERIENCE OF ABON	E NAMED PHYSICIAN (Continued)
SOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION C	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets,) D
P 32 Solt ble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 Colloidal)	INTRACAVITARY TREATMENT		
1-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60	IN TERSTITIAL TREATMENT	and the second	
or Cs-137	INTE ACAVITARY TREATMENT		
I-125 or Ir-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT		
S+-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATO		
Tc-99m	REAGENT KITS		
Other 3 _H	In vitro studies	> 50	Radioactive labeling of bacteria with H
3. DATE	S AND TOTAL NUMBER OF HOURS RECO	EIVED IN CLINICA	RADIOISOTOPE TRAINING
WAS C	RAINING AND EXPERIENCE INDICATED	MOUVE	PTOR'S SIGNATURE
	Id Shay, Ph.D. (now retired) ME OF INSTITUTION	7. PRECE	PTOR'S NAME Please type or print
	ersity of MD at Baltimore -	1. A.	
G MAILING ADDRESS 3900 Loch Raven Boulevard			ank L. Iber, M.D.
a CITY Baltimore		8. DATE	
		1.00	5-6-86

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