

EXHIBIT A

FORM NRC-313M (8-78) 10 CFR 35	U.S. NUCLEAR REGULATORY COMMISSION APPLICATION FOR MATERIALS LICENSE – MEDICAL	Approved: GAO R0557																						
INSTRUCTIONS – Complete Items 1 through 26 if this is an initial application or an application for renewal of a license. Use supplemental sheets where necessary. Item 26 must be completed on all applications and signed. Retain one copy. Submit original and one copy of entire application to: Director, Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Upon approval of this application, the applicant will receive a Materials License. An NRC Materials License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30, and the Licensee is subject to Title 10, Code of Federal Regulations, Parts 19, 20 and 35 and the license fee provision of Title 10, Code of Federal Regulations, Part 170. The license fee category should be stated in Item 26 and the appropriate fee enclosed.																								
1.a. NAME AND MAILING ADDRESS OF APPLICANT (institution, firm, clinic, physician, etc.) INCLUDE ZIP CODE Michigan Osteopathic Medical Center 2700 Martin Luther King Jr. Blvd. Detroit, MI. 48208 TELEPHONE NO.: AREA CODE <u>313</u> <u>3</u> <u>4000x5131</u>		1.b. STREET ADDRESS(ES) AT WHICH RADIOACTIVE MATERIAL WILL BE USED (If different from 1.a.) INCLUDE ZIP CODE <p style="text-align: center;">Same</p>																						
2. PERSON TO CONTACT REGARDING THIS APPLICATION Contact Consultants-Nuclear Medicine Associates, INC. TELEPHONE NO.: AREA CODE <u>216</u> <u>641-5799</u>		3. THIS IS AN APPLICATION FOR: (Check appropriate item) a. <input type="checkbox"/> NEW LICENSE b. <input checked="" type="checkbox"/> AMENDMENT TO LICENSE NO. <u>21-03835-01</u> c. <input type="checkbox"/> RENEWAL OF LICENSE NO. _____																						
4. INDIVIDUAL USERS (Name individuals who will use or directly supervise use of radioactive material. Complete Supplements A and B for each individual.) Amend to add: Christina Torres, D.O.		5. RADIATION SAFETY OFFICER (RSC) (Name of person designated as radiation safety officer. If other than individual user, complete resume of training and experience as in Supplement A.) Robert M. Katz, D.O. with consultation from Nuclear Medicine Associates, INC., Cleveland, OH.																						
6.a. RADIOACTIVE MATERIAL FOR MEDICAL USE																								
RADIOACTIVE MATERIAL LISTED IN:	ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS (In millicuries)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 60%;">ADDITIONAL ITEMS:</th> <th style="width: 10%;">MARK ITEMS DESIRED "X"</th> <th style="width: 30%;">MAXIMUM POSSESSION LIMITS (In millicuries)</th> </tr> <tr> <td>IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM</td> <td></td> <td></td> </tr> <tr> <td>PHOSPHORUS-32 AS SOLUBLE PHOSPHATE FOR TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA AND BONE METASTASES</td> <td></td> <td></td> </tr> <tr> <td>PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.</td> <td></td> <td></td> </tr> <tr> <td>GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.</td> <td></td> <td></td> </tr> <tr> <td>IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA</td> <td></td> <td></td> </tr> <tr> <td>XENON-133 AS GAS OR GAS IN SALINE FOR BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES.</td> <td></td> <td></td> </tr> </table>	ADDITIONAL ITEMS:	MARK ITEMS DESIRED "X"	MAXIMUM POSSESSION LIMITS (In millicuries)	IODINE-131 AS IODIDE FOR TREATMENT OF HYPERTHYROIDISM			PHOSPHORUS-32 AS SOLUBLE PHOSPHATE FOR TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA AND BONE METASTASES			PHOSPHORUS-32 AS COLLOIDAL CHROMIC PHOSPHATE FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.			GOLD-198 AS COLLOID FOR INTRACAVITARY TREATMENT OF MALIGNANT EFFUSIONS.			IODINE-131 AS IODIDE FOR TREATMENT OF THYROID CARCINOMA			XENON-133 AS GAS OR GAS IN SALINE FOR BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES.		
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10 CFR 31.11 FOR IN VITRO STUDIES																								
10 CFR 35.100, SCHEDULE A, GROUP I		AS NEEDED																						
10 CFR 35.100, SCHEDULE A, GROUP II		AS NEEDED																						
10 CFR 35.100, SCHEDULE A, GROUP III																								
10 CFR 35.100, SCHEDULE A, GROUP IV		AS NEEDED																						
10 CFR 35.100, SCHEDULE A, GROUP V		AS NEEDED																						
10 CFR 35.100, SCHEDULE A, GROUP VI																								
6.b. RADIOACTIVE MATERIAL FOR USES NOT LISTED IN ITEM 6.a. (Sealed sources up to 3 mCi used for calibration and reference standards are authorized under Section 35.14(d), 10 CFR Part 35, and NEED NOT BE LISTED.)																								
ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	MAXIMUM NUMBER OF MILLICURIES OF EACH FORM	DESCRIBE PURPOSE OF USE																					
The purpose of this amendment is to add an authorized user in item #8.																								

License Fee Information
on Next Page

INFORMATION REQUIRED FOR ITEMS 7 THROUGH 23

For items 7 through 23, check the appropriate box(es) and submit a detailed description of all the requested information. Begin each item on a separate sheet. Identify the item number and the date of the application in the lower right corner of each page. If you indicate that an appendix to the medical licensing guide will be followed, do not submit the pages, but specify the revision number and date of the referenced guide: Regulatory Guide 10.8, Rev. _____ Date: _____

7. MEDICAL ISOTOPES COMMITTEE		15. GENERAL RULES FOR THE SAFE USE OF RADIOACTIVE MATERIAL (Check One)	
<input type="checkbox"/>	Names and Specialties Attached; and	<input type="checkbox"/>	Appendix G Rules Followed; or
<input type="checkbox"/>	Duties as in Appendix B; or _____ (Check One)	<input type="checkbox"/>	Equivalent Rules Attached
<input type="checkbox"/>	Equivalent Duties Attached	16. EMERGENCY PROCEDURES (Check One)	
8. TRAINING AND EXPERIENCE		<input type="checkbox"/>	Appendix H Procedures Followed; or
<input checked="" type="checkbox"/>	Supplements A & B Attached for Each Individual User; and	<input type="checkbox"/>	Equivalent Procedures Attached
<input type="checkbox"/>	Supplement A Attached for RSO.	17. AREA SURVEY PROCEDURES (Check One)	
9. INSTRUMENTATION (Check One)		<input type="checkbox"/>	Appendix I Procedures Followed; or
<input type="checkbox"/>	Appendix C Form Attached; or	<input type="checkbox"/>	Equivalent Procedures Attached
<input type="checkbox"/>	List by Name and Model Number	18. WASTE DISPOSAL (Check One)	
10. CALIBRATION OF INSTRUMENTS		<input type="checkbox"/>	Appendix J Form Attached; or
<input type="checkbox"/>	Appendix D Procedures Followed for Survey Instruments; or _____ (Check One)	<input type="checkbox"/>	Equivalent Information Attached
<input type="checkbox"/>	Equivalent Procedures Attached; and	19. THERAPEUTIC USE OF RADIOPHARMACEUTICALS (Check One)	
<input type="checkbox"/>	Appendix D Procedures Followed for Dose Calibrator; or _____ (Check One)	<input type="checkbox"/>	Appendix K Procedures Followed; or
<input type="checkbox"/>	Equivalent Procedures Attached	<input type="checkbox"/>	Equivalent Procedures Attached
11. FACILITIES AND EQUIPMENT		20. THERAPEUTIC USE OF SEALED SOURCES	
<input type="checkbox"/>	Description and Diagram Attached	<input type="checkbox"/>	Detailed Information Attached; and
12. PERSONNEL TRAINING PROGRAM		<input type="checkbox"/>	Appendix L Procedures Followed; or _____ (Check One)
<input type="checkbox"/>	Description of Training Attached	<input type="checkbox"/>	Equivalent Procedures Attached
13. PROCEDURES FOR ORDERING AND RECEIVING RADIOACTIVE MATERIAL		21. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE GASES (e.g., Xenon - 133)	
<input type="checkbox"/>	Detailed Information Attached	<input type="checkbox"/>	Detailed Information Attached
14. PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIALS (Check One)		22. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL IN ANIMALS	
<input type="checkbox"/>	Appendix F Procedures Followed; or	<input type="checkbox"/>	Detailed Information Attached
<input type="checkbox"/>	Equivalent Procedures Attached	23. PROCEDURES AND PRECAUTIONS FOR USE OF RADIOACTIVE MATERIAL SPECIFIED IN ITEM 6.b	
		<input type="checkbox"/>	Detailed Information Attached

24. PERSONNEL MONITORING DEVICES

TYPE (Check appropriate box)		SUPPLIER	EXCHANGE FREQUENCY
a. WHOLE BODY	FILM	no change	
	TLD		
	OTHER (Specify)		
b. FINGER	FILM		
	TLD		
	OTHER (Specify)		
c. WRIST	FILM		
	TLD		
	OTHER (Specify)		

d. OTHER (Specify)

RECEIVED BY LFMB	
Date.. 11/5/84	
Log. N. v. III	
By.. 8	
Orig. To	
Action Compl. 11/6/84	

Applicant.....
 Check No. 53326
 Amount/Fee Category, \$120.00
 Type of Fee. Amendment
 Date Check Rec'd 11/5/84
 Received By. Jackson

25. FOR PRIVATE PRACTICE APPLICANTS ONLY

a. HOSPITAL AGREEING TO ACCEPT PATIENTS CONTAINING RADIOACTIVE MATERIAL

NAME OF HOSPITAL

MAILING ADDRESS

CITY

STATE

ZIP CODE

b. ATTACH A COPY OF THE AGREEMENT LETTER SIGNED BY THE HOSPITAL ADMINISTRATOR.

c. WHEN REQUESTING THERAPY PROCEDURES, ATTACH A COPY OF RADIATION SAFETY PRECAUTIONS TO BE TAKEN AND LIST AVAILABLE RADIATION DETECTION INSTRUMENTS.

26. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 1a certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Parts 30 and 35, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

a. LICENSE FEE REQUIRED
 (See Section 170.31, 10 CFR 170)

(1) LICENSE FEE CATEGORY:

(2) LICENSE FEE ENCLOSED: \$ 120.00

b. APPLICANT OR CERTIFYING OFFICIAL (Signature)

(1) NAME (Type of Print)

Chester L. Veal

(2) TITLE

Vice President-Operations

c. DATE

September 12, 1984

CONTROL NO. 77694

TRAINING AND EXPERIENCE
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER Christina Torres, D.O.	2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE Michigan, Ohio
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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	BEAUMONT Hosp - MI 5/1 - 7-31-83 Sinai Hosp - MI 1/1/83 - 4/84 Doctors Hosp - OH 8/81 to 11-82 ACCR course - NJ 5/1 - 5/4/82 1/11 - 1/18/82	150	50
b. RADIATION PROTECTION	Same Plus Cleveland OH 4/83	30	40
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	SAME	20	10
d. RADIATION BIOLOGY	SAME AND Cleveland Clinic - OH 4/83	35	
e. RADIOPHARMACEUTICAL CHEMISTRY	Same	40	8

5. EXPERIENCE WITH RADIATION. (Actual use of Radioisotopes or Equivalent Experience)				
ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
Tc-99m	.5uCi-25mCi	Michigan Osteopathic Medical Center, Beaumont Hospital	January 2, 1983- August 31, 1984 (inclusive)	Lung, liver, brain, thyroid, bone, cardiac, liver function,
I-123	350uCi	Same	"	Thyroid function
I-131	100uCi	Same	"	Thyroid function
Xe-133	15mCi	Same	"	Lung ventilation
I-125	50uCi	Beaumont Hospital	May 1, 1984-July 31	In-vitro kits
Tl-201	2.5mCi	Same	" 1984	

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 <u>Christina Torres, D.O.</u>		
STREET ADDRESS <u>47885 Denton</u>		
CITY <u>Belleville,</u>	STATE <u>MI.</u>	ZIP CODE <u>48111</u>

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 sheet.) D
I-131 or I-125	DIAGNOSIS OF THYROID FUNCTION	7	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES (99mTc)	91	
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES		
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING (123I)	24	
P-32	EYE TUMOR LOCALIZATION		
Se-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	180	
OTHER			
Tc-99m	BRAIN IMAGING	263	
	CARDIAC IMAGING	35	
	THYROID IMAGING	113	
	SALIVARY GLAND IMAGING	1	
	BLOOD POOL IMAGING	8	
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING	473	
	LUNG IMAGING	184	
	BONE IMAGING	224	
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	10	
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			

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

January 2, 1983-March 31, 1983
 August 1, 1983 -January 31, 1984
 August 1, 1984 -August 31, 1984

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

a. NAME OF SUPERVISOR

Robert M. Katz, D.O.

b. NAME OF INSTITUTION

Michigan Osteopathic Medical Center

c. MAILING ADDRESS

2700 Martin Luther King Blvd.

d. CITY

Detroit

5. MATERIALS LICENSE NUMBER(S)

21-03835 01

6. PRECEPTOR'S SIGNATURE

Robert M. Katz D.O.

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

Robert M. Katz, D.O.

8. DATE

September 5, 1984

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

CRISTINA TORRES

STREET ADDRESS

47885 Denton

CITY

Belleville

STATE

MI

ZIP CODE

48111

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	7	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	16	
	LIVER FUNCTION STUDIES	-	
	FAT ABSORPTION STUDIES	2	
	KIDNEY FUNCTION STUDIES	-	
	IN VITRO STUDIES		
OTHER		See attached	
I-125	DETECTION OF THROMBOSIS	1	
I-131	THYROID IMAGING	7	
P-32	EYE TUMOR LOCALIZATION	1	
Se-75	PANCREAS IMAGING	1	
Yb-169	CISTERNOGRAPHY In-111 UTPA	3	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	79	
OTHER			
Tc-99m	BRAIN IMAGING and Flow	165	
	CARDIAC IMAGING (Thallium)	398	
	THYROID IMAGING	171	
	SALIVARY GLAND IMAGING	1	
	BLOOD POOL IMAGING	281	
	PLACENTA LOCALIZATION	0	
	LIVER AND SPLEEN IMAGING	294	
	LUNG IMAGING	86	
	BONE IMAGING	607	
OTHER		See attached	

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	4	
P-32 (Colloidal)	INTRACAVITARY TREATMENT	0	
I-131	TREATMENT OF THYROID CARCINOMA	1	
	TREATMENT OF HYPERTHYROIDISM	8	
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	6	
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS	6	
Other			

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

May 1 - July 31, 1983

500 Hours

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

a. NAME OF SUPERVISOR

Howard J. Dworkin, M.D.

b. NAME OF INSTITUTION

William Beaumont Hospital

c. MAILING ADDRESS

3601 West 13 Mile Road

d. CITY

Royal Oak

5. MATERIALS LICENSE NUMBER(S)

21-01333-01

6. PRECEPTOR'S SIGNATURE

Howard J. Dworkin

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

Howard J. Dworkin, M.D.

8. DATE

February 22, 1984