### MERCY HOSPITAL

West Central Park at Marquette \* Davenport, Iowa 52804 \* 319-383-1000

May 7, 1984

RECEIVED BY LEMB Date

Medical Licensing Materials Branch U.S. Nuclear Regulatory CommisAmbicant.... Region III 799 Roosevelt Road Glen Ellyn, IL 60137

Amendment Request License No. 14-14621-01

Dear Sirs:

Amoun!

Type of F Date Check Received By

This is a request to amend our license to include the use of 137-cesium sealed sources for brachytherapy use, and to add Dr. Farida B. Rajput, M.D. as an authorized user for this material. A check for \$40.00 for the amendment fee is enclosed.

Note that this amendment will only become effective following the approval of a license application to store and own the 137 cesium sealed sources by Dr. Rajput. Also, please note that we are eager to begin brachytherapy procedures and would appreciate your prompt attention to these requests.

In support of this request we offer the following responses to your questions in Regulatory Guide 10.8 of October, 1980. The first items are the enumeration of Item 20, Page 10.8-11.

20a. The sources will not be stored in the hospital. They will be brought from Dr. Rajput's facility immediately before use and will be returned promptly following use.

20b. Sources will be used in Fletcher-Suit or similar afterloading applicators. Long-handled forceps and/or long handled hemostats will be available during source implantation and removal. Specialized leaded source carriers will be used when sources are moved within the hospital.

20c. Dr. Rajput or other source handler (such as her physicist) will use both whole body film badges and TLD ring badges. These will be read monthly.

20d. Specialed leaded carriers will be used to move the sources from Dr. Rajput's facility into and through the hospital.

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20e. Source loading into the applicator inserts and of the inserts into the carriers will occur in Dr. Rajput's facility. Reference should be made to her application; however, sources will be counted and logged both in loading and unloading.

20F. As soon as is practical after implant the patient and environs will be surveyed. Survey points will include bedside, 3 ft. visitor's chair, and adjacent areas in other rooms, halls, etc. The survey will be conducted by or under the supervision of Dr. Rajput or her physicist. Dr. Rajput will survey the patient immediately after the sources have been removed to assure full removal of the sources. The patient will not be discharged until this survey is completed and noted in the patient's chart. The patients' bedding or other items retained will be surveyed at this time before release to the laundry, disposal or other normal channels.

20g. The instructions under "8" in Appendix L of the Guide (10.8) will be supplied to the nurses with each case as well as a completed copy of page 10.8-49.

Appendix L items will be followed in exact detail as indicated below.

- 1. Brachytherapy patients will have sole occupancy of their room during treatment. Patients who are able to use toilet facilities during treatment will have a room with private toilet facilities.
- 2. The patient's room will be posted with a large placard with a magenta radiation symbol as specified in Part 20. The placard will also have the words "CAUTION -- RADIOACTIVE MATERIAL" as well as two smaller statements: "visitors must check with the nursing station for instructions before entering", and "In an emergency contact Dr. F. Rajput at 383-2563".
- 3. As indicated above for item 20f, these surveys will be carried out with notations in the chart and the nursing instruction form.
- 4. Will be followed.
- 5. Radiation levels in adjaxent unrestricted areas will be maintained below 2 mR/hr or 100 mR/case. Not more than one case per week in a particular room is anticipated. If levels greater than this are encountered on survey, the patient may be repositioned within the room or to another room to reduce the exposure to the mandated levels, the unrestricted area may be made a restricted area with appropriate postings, barricades, etc.; however, such area shall not contain an adjacent non-radioactive patient. If all else fails to reduce the levels to the above values some or all of the sources will be removed.

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- 6. Film badges will be assigned to the nurses. If extended personal care is needed this will either be supplied by the physician or the sources will be temporarily removed and shielded by the physician. If after at least half a dozen cases the nurses' film badges indicate values of exposure well below those requiring badging, the Radiation Safety Committee may approve their termination.
- 7. Will be followed.
- 8. Will be supplied to the nurses with section 8.0.3 being completed. In cases which state Radiation Safety Officer, also include Radiation Therapist or Radiation Therapy Physicist.

In addition to the above responses this amendment application contains a copy of Dr. Rajput's preceptor statement and other supporting data.

While we realize your review will take some time, we are eager to start offering our patients this new service. As such, we will be prompt in supplying you with additional material if you will indicate what you need.

Sincerly,

James P. Hamill President

JPH/pc

Encls.

### NRC FORM 313M SUPPLEMENT A

### U.S. NUCLEAR REGULATORY COMMISSION

(9-81)

## TRAINING AND EXPERIENCE AUTHORIZED USER OR RADIATION SAFETY OFFICER

1 NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER
2 STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE IOWA & Illinois

SPECIALTY BOARD	CATEGORY	MONTH AND YEAR CERTIFIED
American Board of Radiology	Therapeutic Radiology	Board Eligible (passed written boards

### 4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

		TYPE AND LENGTH OF TRAINING		
FIELD OF TRAINING	LOCATION AND DATE (S) OF TRAINING	LECTURE/ LABORATORY COURSES (Hours)	SUPERVISED LABORATORY EXPERIENCE (Hours)	
a RADIATION PHYSICS AND INSTRUMENTATION	University of Iowa Hosp.&Clini 1. Lesidency July 1978-June 19 2. Junior Faculty Oct. 1982- Dec. 1983			
b. RADIATION PROTECTION		36 HRS		
c. MATHEMATICS PERTAINING T THE USE AND MEASUREMENT OF RADIDACTIVITY		22 HRS		
d. RADIATION BIOLOGY		80 HRS		
e. RADIOPHARMACEUTICAL CHEMISTRY		27 HRS		

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPE	RIENCE W	AS GAINED	DURATION OF	EXPERIENCE	TYPE OF USE
Ra 226 Cs 137	1 GM	University	of Iow	a Hsp.&Cl	inic 4	years	Intracayitary Application for Lyhocological Malignancies
P32	80 mci	" "			4	years	Intraperitoneal Applic for Cancers
Aul98	3-400 mci	" "			4	years	Interestial application for he neck cancers

### PRECEPTOR STATEMENT

Supplement 8 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.

#### KEY TO COLUMN C 1. APPLICANT PHYSICIAN'S NAME AND ADDRESS PERSONAL PARTICIPATION SHOULD CONSIST OF: FULL NAME 1-Supervised examination of patients to determine the suitability for radioisotope diagnosis and/or treatment and recommendation for Farida B. Rajput, M.D. prescribed dosage. STREET ADDRESS 2 Collaboration in dose calibration and actual administration of dose to the patient including calculation of the radiation dose, related 1351 W. Central Park Ave. measurements and plotting of data. Contral Park Medcial Pavilion 3-Adequate period of training to enable physician to manage radioactive ZIPCODE STATE CITY patients and follow patients through diagnosis and/or course of treatment. 52804 Davenport IA

# 2. CLINICAL TRAINING AND EXPERIENCE OF ABOVE NAMED PHYSICIAN NUMBER OF CASES INVOLVING COMMENTS PERSONAL PARTICIPATION De submitted in duplicate on sept

SOTOPE	CONDITIONS DIAGNOSED OR TREATED	PARTICIPATION	(Additional information or comments may be submitted in duplicate on separate sheets.
	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		
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			
	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		the second	

### PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS  (Additional information or comments may be submitted in duplicate on separate sheets,)
A	8	C	D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA. LEUKEMIA, AND BONE METASTASES		
P-32 (Colloidal)	INTRACAVITARY TREATMENT	20	
1-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60	INTERSTITIAL TREATMENT	10	
Cs-137	INTRACAVITARY TREATMENT	160	
I-125 or Ir-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT	550	
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION	F/S CHARLE	
Mo-99/ Tc-99m	GENERATOR		
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other	PHE PLANE IN THE PARTY		

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

07/01/78 to 06/30/82 Resident, Division of Radiation Therapy, University of Iowa Hospitals and Clinics
Clinical Training in Group VI Procedures: a. Training in basic Radioisotope handling (400 hours) b. Experience with radioactive material 700 hours

4.	THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:	Haward B. Latamette M.D.
	Hamed H. Tewfik M.D. Howard B. Latoutette; M.D.	Haward VS. Farmella 17.10.
	University of Iowa Hospitals and Clin	7. PRECEPTOR'S NAME (Please type or print)
	6. MAILING ADDRESS Towa City, Iowa 52242	Howard B. Latourette, M.D.
	d CITY	8. DATE
5.	MATERIALS LICENSE NUMBER(S) 14-02938-07	April 12, 1984

NRC FORM 313M SUPPLEMENT B (9-81)

### PRECEPTOR STATEMENT (Continued)

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

ISOTOPE	CONDITIONS DIAGNOSED OR TREATED	NUMBER OF CASES INVOLVING PERSONAL PARTICIPATION	COMMENTS (Additional information or comments may be submitted in duplicate on separate sheets,)
A	8	C	D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES		
P-32 (Colio dal)	INTRACAVITARY TREATMENT	20	
1-131	TREATMENT OF THYROID CARCINOMA		
	TREATMENT OF HYPERTHYROIDISM		
Au-198	INTRACAVITARY TREATMENT		
Co-60	INTERSTITIAL TREATMENT	10	
C+137	INTRACAVITARY TREATMENT	160	
1-125 or 1r-192	INTERSTITIAL TREATMENT		
Co-60 or Cs-137	TELETHERAPY TREATMENT	550	
Sr-90	TREATMENT OF EYE DISEASE	3	
	RADIOPHARMACEUTICAL PREPARATION		
Ma-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

the 12/1978 -> fre 31/19 &2: - as a Resident in Rediction News Proportional Training in Group VI Procedures: - { (a) Training in bosic Redicionage heading: 400 hours Claimed Training in Group VI Procedures: - { (4) Experience with Redirective mercial: 700 hours.

4. THE TRAINING AND EXPERIENCE INDICATED ABOVE WAS OBTAINED UNDER THE SUPERVISION OF:	7 6. PRECEPTOR'S SIGNATURE
7/78 TO 6/80 Howard Latourette, M.D. 7/80 to 6/82 Hamed H. Tewfik, M.D.	12000
the NAME OF INSTITUTION  University of Iowa Hospitals and Clinics	7. PHECEPTOR'S NAME (Please type or print)
c. MAILING ADDRESS Division of Radiation Therapy	Hamed H. Tewfik, M.D.
Iowa City, Iowa 52242	8. DATE April 9, 1984
5. MATERIALS LICENSE NUMBERIS) 14-02938-07	April 7, 1704

NRC FORM 313M SUPPLEMENT B

# The University of Iowa

### UNIVERSITY HOSPITALS AND CLINICS

THIS IS TO CERTIFY THAT

Farida B. Rajput, Al.B.B.S. HAS COMPLETED THE SERVICE OF

Resident Physician

in the Department of Radiology

Therapeutic Radiology

July 1, 1978 to July 1, 1982 TO THE SATISFACTION OF THE

OFFICERS AND STAFF OF THE UNIVERSITY HOSPITALS AND CLINICS IN WITNESS WHEREOF, THIS CERTIFICATE IS AWARDED AT IOWA CITY, IOWA.

JULY 1, 1982

PRESIDENT OF UNIVERSITY

HEAD OF THE DEPARTMENT



DIRECTOR, SINIVERS TY HOSPITALS AND CLINICS AND ASSISTANT TO THE PROSIDENT FOR STATEWIDE HEALTH SERVICES

Johnweckstein
DEAN OF THE TILLEGE OF MEDICINE