



**NORWEGIAN  
AMERICAN  
HOSPITAL**

1044 N. Francisco Ave.  
Chicago, IL 60622  
312/278-8800

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William W. Leyhe

June 13, 1985

Materials Licensing Section  
U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Reference: License No. 12-15299-01

Gentlemen:

Please accept this letter (in duplicate) as an application to amend the above referenced license to add Bhanu Rangachari, M.D. as an authorized user.

For her training and experience, please refer to the attached Supplements A and B. A check for \$120.00 as amendment filing fee is also attached.

We hope the information submitted is satisfactory.

Sincerely,

NORWEGIAN-AMERICAN HOSPITAL, INC.

*William W. Leyhe*  
William Leyhe  
Administrator

enclosures

RECEIVED

JUN 24 1985

REGION III

8507190511 850702  
REG3 LIC30  
12-15299-01 PDR

JUN 24 1985

CONTROL NO. 7 9212

RECEIVED  
JUN 27 1985  
U.S. N.R.C. BRANCH  
LIC. FEE MGMT. BRANCH

Applicant	June 25, 1985
Check No.	6289.6
Amount	\$120
Type of Fee	Regional
Date Check Rec'd	6/27/85
Received By	[Signature]

**TRAINING AND EXPERIENCE  
AUTHORIZED USER OR RADIATION SAFETY OFFICER**

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

**BHANU RANGACHARI, M.D.**

2. STATE OR TERRITORY IN  
WHICH LICENSED TO  
PRACTICE MEDICINE

**Illinois & California**

**3. CERTIFICATION**

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
Diagnostic Radiology		June 1980

**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	St. Francis Hospital, Evanston, IL June 1976 thru June 1980	150	
b. RADIATION PROTECTION	St. Francis Hospital, Evanston, IL June 1976 thru June 1980	100	
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	St. Francis Hospital, Evanston, IL June 1976 thru June 1980	40	
d. RADIATION BIOLOGY	St. Francis Hospital, Evanston, IL June 1976 thru June 1980	40	
e. RADIOPHARMACEUTICAL CHEMISTRY	Loyola University Medical Center Maywood, IL May & June 1978	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
Tc99m	5 to 25 mCi/Dose several doses	St. Francis Hosp., Evanston, IL	1/79 - 6/79	Diagnostic
I-131	Several millicuries	Loyola Univ., Maywood, IL	5/78 & 6/78	Diagnostic & Therapeutic
Ga-67	Several millicuries	Loyola Univ., Maywood, IL	5/78 & 6/78	Diagnostic
Xe-133	Several millicuries	Columbus Hosp., Chicago IL	7/80 thru 6/81	Diagnostic
Yb-169	Several millicuries	Columbus Hosp., Chicago IL	7/80 thru 6/81	Diagnostic
I-123, I-125	Several mCi	Columbus Hosp., Chicago IL	7/80 thru 6/81	Diagnostic

# 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		<b>KEY TO COLUMN C</b> <b>PERSONAL PARTICIPATION SHOULD CONSIST OF:</b> 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		
BHANU, Rangachari, M.D.		
STREET ADDRESS		
205 Somerset Court		
CITY	STATE	ZIP CODE
Willowbrook,	Ill.	60521

## 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	31	
	IN VITRO STUDIES Total Studies	1450	
OTHER			
I-125	DETECTION OF THROMBOSIS	-	
I-131	THYROID IMAGING	-	
P-32	EYE TUMOR LOCALIZATION	-	
Se-75	PANCREAS IMAGING	2	
Yb-169	CISTERNOGRAPHY	4	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	-	
OTHER			
Tc-99m	BRAIN IMAGING	88	
	CARDIAC IMAGING	42	
	THYROID IMAGING	79	
	SALIVARY GLAND IMAGING	30	
	BLOOD POOL IMAGING	-	
	PLACENTA LOCALIZATION	-	
	LIVER AND SPLEEN IMAGING	150	
	LUNG IMAGING	155	
	BONE IMAGING	130	
OTHER	Gallium Scans	55	

**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	6	
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	60 hours	
Mo-99/ Tc-99m	GENERATOR	3	
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS		
Other	99mTc MAA 99mTc Sulfur Colloid 99mTc MDP 99mTc PYP 99mTc Glucoheptonate		

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

May, June - 1978

320 hours

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

**a. NAME OF SUPERVISOR**

Robert E. Henkin, M.D.

**b. NAME OF INSTITUTION**

Loyola University Medical Center

**c. MAILING ADDRESS**

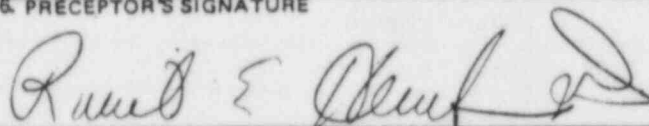
2160 So First Avenue

**d. CITY**

Maywood, Illinois

**5. MATERIALS LICENSE NUMBER(S)**

**6. PRECEPTOR'S SIGNATURE**



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

Robert E. Henkin, M.D.

**8. DATE**

May 1, 1985

## 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
FULL NAME BHANU RANGACHARI, M.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 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.
STREET ADDRESS 205 SOMERSET COURT			
CITY WILLOWBROOK	STATE IL	ZIP CODE 60521	

## 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	100	
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME	10	
	LIVER FUNCTION STUDIES	0	
	FAT ABSORPTION STUDIES	0	
	KIDNEY FUNCTION STUDIES	200	
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS	0	
I-131	THYROID IMAGING	0	
P-32	EYE TUMOR LOCALIZATION	0	
Se-75	PANCREAS IMAGING	20	
Yb-169	CISTERNOGRAPHY	5	
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES	300	
OTHER			
Tc-99m	BRAIN IMAGING	1000	
	CARDIAC IMAGING	500	
	THYROID IMAGING	300	
	SALIVARY GLAND IMAGING	10	
	BLOOD POOL IMAGING	100	
	PLACENTA LOCALIZATION	0	
	LIVER AND SPLEEN IMAGING	1000	
	LUNG IMAGING	500	
	BONE IMAGING	1000	
OTHER			



# 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	B	C	D
P-32 (Soluble)	TREATMENT OF POLYCYTHEMIA VERA, LEUKEMIA, AND BONE METASTASES	0	
P-32 (Colloidal)	INTRACAVITARY TREATMENT	0	
I-131	TREATMENT OF THYROID CARCINOMA	24	
	TREATMENT OF HYPERTHYROIDISM	20	
Au-198	INTRACAVITARY TREATMENT	0	
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	1	
Other			

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

Jul 80 - Jun 81 (500 hrs)

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

a. NAME OF SUPERVISOR

Thomas W. Kyerson

b. NAME OF INSTITUTION

Columbus Hosp

c. MAILING ADDRESS

2520 N. Lakeview

d. CITY

Chicago 60614

5. MATERIALS LICENSE NUMBER(S)

12-00534-03

6. PRECEPTOR'S SIGNATURE

Thomas W. Kyerson

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

THOMAS W. KYERSON MD

8. DATE

4/22/85

## 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
FULL NAME <b>BHANU RANGACHARI, M.D.</b>		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.
STREET ADDRESS <b>205 SOMERSET COURT</b>		
CITY <b>WILLOWBROOK</b>	STATE <b>IL</b>	

## 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	68	Dr. Rangachari obtained this experience over a period of six months. This included one solid month (Jan. 1979) of Nuclear Medicine duties while the other five months were spent partially in Nuclear Medicine. RHR.
	DETERMINATION OF BLOOD AND BLOOD PLASMA VOLUME		
	LIVER FUNCTION STUDIES		
	FAT ABSORPTION STUDIES		
	KIDNEY FUNCTION STUDIES	35	
	IN VITRO STUDIES		
OTHER			
I-125	DETECTION OF THROMBOSIS		
I-131	THYROID IMAGING		
P-32	EYE TUMOR LOCALIZATION		
Sr-75	PANCREAS IMAGING		
Yb-169	CISTERNOGRAPHY		
Xe-133	BLOOD FLOW STUDIES AND PULMONARY FUNCTION STUDIES		
OTHER			
Tc-99m	BRAIN IMAGING	475	
	CARDIAC IMAGING	83	
	THYROID IMAGING	230	
	SALIVARY GLAND IMAGING	12	
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION	7	
	LIVER AND SPLEEN IMAGING	612	
	LUNG IMAGING	298	
	BONE IMAGING	540	
OTHER	CALCIUM TUMOR IMAGING	113	

# 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		The experience here was limited & only designed to give some first hand experience in the set-up & milking of a generator as well as reagent kit usage for bone, liver & lung imaging RLK.
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 Co-60 or Cs-137	INTERSTITIAL TREATMENT		
	TELETHERAPY TREATMENT		
Sr-90	TREATMENT OF EYE DISEASE		
	RADIOPHARMACEUTICAL PREPARATION		
Mo-99/ Tc-99m	GENERATOR	3	
Sn-113/ In-113m	GENERATOR		
Tc-99m	REAGENT KITS	12	
Other			

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

January 1979 - 160 hours  
February through June 1979 - 100 hours  
Total hours - 260

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

a. NAME OF SUPERVISOR

RICHARD L. KOSMALA M.D.

b. NAME OF INSTITUTION

ST. FRANCIS HOSPITAL

c. MAILING ADDRESS

355 RIDGE AVE.

d. CITY

EVANSTON, ILL. 60202

## 5. MATERIALS LICENSE NUMBER(S)

12-963-2

## 6. PRECEPTOR'S SIGNATURE

Richard L. Kosmala M.D.

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

RICHARD L. KOSMALA

## 8. DATE

4-26-85



## 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
FULL NAME BHANU RANGACHARI, M.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 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.
STREET ADDRESS 205 SOMERSET COURT			
CITY WILLOWBROOK	STATE IL	ZIP CODE 60521	

## 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	2	
	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	15	
	CARDIAC IMAGING		
	THYROID IMAGING	16	
	SALIVARY GLAND IMAGING		
	BLOOD POOL IMAGING		
	PLACENTA LOCALIZATION		
	LIVER AND SPLEEN IMAGING	8	
	LUNG IMAGING	5	
BONE IMAGING	4		
OTHER			

# 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	B	C	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		
	TELETHERAPY TREATMENT		
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

APRIL 1984 - FEBRUARY 1985

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

a. NAME OF SUPERVISOR

DEEPAK P. DALIA MD

b. NAME OF INSTITUTION

GLENDALE HEIGHTS COMM. HOSPITAL

c. MAILING ADDRESS

555 VINE AVENUE

d. CITY

HIGHLAND PR

5. MATERIALS LICENSE NUMBER(S)

GHCH NRC#12-18793-01 / State# IL-00476-01

## 5. PRECEPTOR'S SIGNATURE

*[Signature]*

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

DEEPAK P. DALIA MD

## 8. DATE

4-16-85