

Veterans
Administration

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NUCLEAR MEDICINE SERVICE
(115)In Reply Refer To:
612/11R

FEB 4 1985

U.S. Nuclear Regulatory Commission
Material Licensing Branch
Division of Fuel Cycle and Material Safety
Office of Material Safety and Safeguards
Washington, D.C. 20555

THRU: Chief, Nuclear Medicine Service (115)
Department of Medicine and Surgery
Veterans Administration Central Office
810 Vermont Avenue, N.W.
Washington, D.C. 20420

SUBJ: Request for amendment to Materials License Number 04-02956-2

1. An amendment is requested to our byproduct materials license, Number 04-02956-02. It is requested that the maximum possession limits of the following byproduct materials be increased to the indicated amounts:

Material	Form	Amount	Use
Hydrogen-3	Prelabelled organic chemicals	120 millicuries	In-vitro and animal studies
Carbon-14	any	60 millicuries	In-vitro and animal studies
Phosphorus-32	any	40 millicuries	In-vitro and animal studies
Sulfur-35	any	40 millicuries	In-vitro and animal studies
Chromium-51	any	20 millicuries	In-vitro and animal studies
Iodine-125	any	60 millicuries	In-vitro and animal studies
Iodine-131	any	20 millicuries	In-vitro and animal studies

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It is also requested that the following byproduct materials and the maximum possession limits indicated below be added to our license:

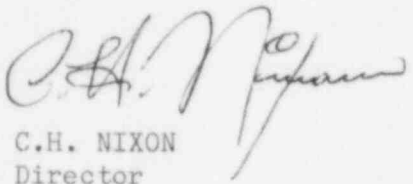
Material	Form	Amount	Use
Calcium-45	any	40 millicuries	In-vitro and animal studies
Chlorine-36	any	40 millicuries	In-vitro and animal studies

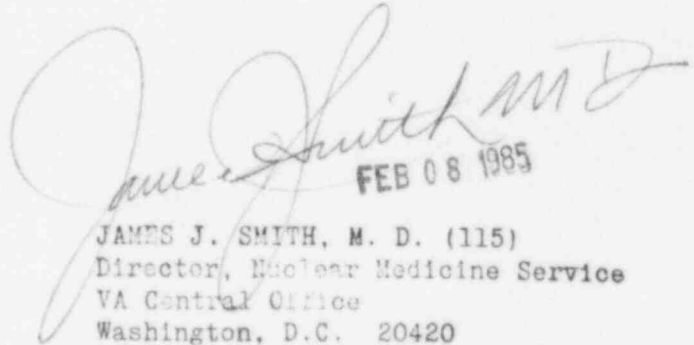
These amendments to our license are requested to facilitate increased research at our institution; to enable users of radioactive materials to purchase larger activities, thereby reducing the cost per unit activity; and to allow the storage prior to disposal of larger amounts of radioactive waste from these increased research activities.

2. It is requested that Adhip Majumdar, Ph.D., and Brian Berman, M.D., Ph.D., be designated authorized users by our license to use byproduct materials for in-vitro and animal studies. The training and experience of Drs. Majumdar and Berman are described on the attached forms.

3. It is requested that our mailing address be changed to:

Veterans Administration Medical Center
Attention: Radiation Safety Officer (11R)
150 Muir Road
Martinez, CA 94553


C.H. NIXON
Director


FEB 08 1985
JAMES J. SMITH, M. D. (115)
Director, Nuclear Medicine Service
VA Central Office
Washington, D.C. 20420

**TRAINING AND EXPERIENCE
AUTHORIZED USER**

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

Brian Berman, M.D., Ph.D.

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

California and New York

3. CERTIFICATION

SPECIALTY BOARD A	CATEGORY B	MONTH AND YEAR CERTIFIED C
Dermatology	Diplomate	1979

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			
b. RADIATION PROTECTION	New York University New York, NY - 1970	6	--
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY			
d. RADIATION BIOLOGY			
e. RADIOPHARMACEUTICAL CHEMISTRY			

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	5mCi	New York Univ-New York, NY	1970-79	Research
		Mt. Sinai Hosp. " " NY	1980-83	Research
		VA Med. Ctr. Martinez, CA	1983-85	Research
^{14}C	1mCi	New York Univ.-New York	1970-79	Research
		VA Med. Ctr. Martinez, CA	1983-85	Research
^{35}S	1mCi	New York Univ. New York	1970-79	Research
^{125}I	1mCi	Mt. Sinai Hosp. New York	1980-83	Research

(8-78)

TRAINING AND EXPERIENCE AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

ADHIP N. MAJUMDAR, PH.D., D.Sc.

2. STATE OR TERRITORY IN
WHICH LICENSED TO
PRACTICE MEDICINE

3. CERTIFICATION

SPECIALTY BOARD
ACATEGORY
BMONTH 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	Clinical Research Institute of Montreal, Montreal, Canada, & McMaster University, Hamilton, Canada (Nov. '69 - March '72)	-	20 hr.
b. RADIATION PROTECTION	University of Texas Medical School, Houston, Texas. (Sept. '80 - Dec. '81)	16 hr	50 hr
c. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENT OF RADIOACTIVITY	University of Kalyani, Kalyani, India & University of London, London, England (Aug. '60 - Oct. '68)	15 hr	-
d. RADIATION BIOLOGY	University of London, London, England & University of Aarhus, Aarhus, Denmark. (Sept. '65 - Oct. '68 & April '72 - Aug. '80)	10 hr	-
e. RADIOPHARMACEUTICAL CHEMISTRY	University of London, London, England, & University of Aarhus, Aarhus, Denmark. (Sept. '65 - Oct. '68 & April '72 - Aug. '80)	10 hr	20 hr.

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

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
		PLEASE SEE ATTACHED PAGES		

ADHIP N. MAJUMDAR, PH.D., D.Sc.

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
³ H-amino acids	2 mCi	Clinical Research Institute of Montreal, Montreal, Canada	Jan'69 - Aug'70	RESEARCH: Aminoacylation of tRNA to study biosynthesis of proteins.
¹⁴ C-amino acids	0.5mCi	- same as above-	-same as above-	-same as above-
³ H-amino acids	2 mCi	Biochemistry Department, McMaster University, Hamilton, Ontario, Canada.	Sept.'70- Mar.'72	RESEARCH: Biosynthesis of polypeptide hormones <u>in vitro</u>
¹⁴ C-amino acids	1 mCi	- same as above-	-same as above-	-same as above-
³ H-amino acids	10 mCi	Institute of Medical Biochemistry, University of Aarhus, Aarhus, Denmark.	April'72-Aug'80	RESEARCH: Biosynthesis of proteins <u>in vivo and in vitro</u>
¹⁴ C-amino acids	2 mCi	- same as above -	-same as above-	- same as above-
³ H-nucleotides	10 mCi	- same as above-	-same as above-	RESEARCH: Biosynthesis of DNA and RNA <u>in vivo and in vitro</u>
¹⁴ C-nucleotides	2 mCi	- same as above-	-same as above-	- same as above-
³⁵ S-amino acids	1 mCi	- same as above-	-same as above-	- RESEARCH: Biosynthesis of polypeptide hormones <u>in vitro</u>
¹²⁵ I	5 mCi	- same as above-	-same as above-	- RESEARCH: Iodination of peptide hormones and other proteins.
¹²⁵ I	5 mCi	Physiology Dept., University of Texas Medical School, Houston, Texas.	Sept.'80-Dec.'81	- RESEARCH RIA & Receptor study of polypeptide hormones.
³ H-amino acids	5 mCi	Institute of Medical Biochemistry, University of Aarhus, Aarhus, Denmark.	Jan.'82-Oct.'83	-RESEARCH: Biosynthesis of proteins <u>in vivo and in vitro</u>

Continued p.2.

ADHIP N. MAJUMDAR, PH.D., D.Sc.

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
³ H-nucleotides	5 mCi	Institute of Medical Biochemistry, University of Aarhus, Aarhus, Denmark.	Jan '82-Oct. '83	-RESEARCH: DNA & RNA Synthesis <u>in vivo</u> and <u>in vitro</u> .
¹²⁵ I	5 mCi	- same as above -	-same as above-	-RESEARCH: Iodination of peptide hormones to study their binding to cell membranes & to measure their concentrations in tissues and serum by radio-immunoassays (RIA)
¹²⁵ I	5 mCi	Enzymology Research Lab, VA Medical Center, Martinez, CA.	Nov. '83--	-RESEARCH: Iodination of various enzymes to measure their concentration in tissues and serum by RIA
³ H-amino acids	2 mCi	- same as above-	-same as above-	-RESEARCH: Protein synthesis <u>in vitro</u> .
¹⁴ C-amino acids	0.25 mCi	- same as above-	-same as above-	- same as above-
³ H-nucleotides	0.25 mCi	-same as above-	-same as above-	-RESEARCH: Synthesis and degradation of RNA <u>in vitro</u> .

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