

*NMSB 2*

May 20, 2005

U.S. Nuclear Regulatory Commission, Region II  
Materials Licensing  
Division of Nuclear Material Safety  
Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23T85  
Atlanta, GA 30303

*03036776*

RECEIVED  
REGION II  
2005 AUG 17 AM 11:43

RE: Amendment request for license 45-30980-01

Attention: Licensing

Please amend the above referenced license to add as authorized user Yaning Liu, M.D. I have included the Training and Experience and Preceptor Statement for your review. Your assistance with this request is much appreciated.

Sincerely,

*Carol P. Cardinale MD*  
Carol P. Cardinale, MD  
Radiation Safety Officer



ROBERT WOOD JOHNSON MEDICAL SCHOOL

Department of Radiology  
Phone: (732) 235-7721/7722/7723  
Fax: (732) 235-6889

One Robert Wood Johnson Place, P.O. Box 19  
New Brunswick, New Jersey 08903-0019

June 9, 2000

RE: YANING LIU, M.D.

To Whom It May Concern:

This letter is to certify that Dr. Yaning Liu has gained clinical and technical expertise in nuclear cardiology at Robert Wood Johnson University Hospital and Deborah Heart and Lung Center in New Jersey. This experience was gained during her cardiology fellowship. During this time, Dr. Liu has been active in the performance and interpretation of nuclear cardiology imaging procedures. These procedures include exercise, pharmacologic stress imaging, resting myocardial perfusion scans employing thallium and technetium-based agents as well as SPECT technique. Gated blood pool imaging as well as infarct avid imaging was also performed.

Dr. Liu has spent a total of 2 months in formal non-invasive stress/imaging and 1-1/2 months in nuclear medicine rotations at Robert Wood Johnson University Hospital from July 1998 through June 2000. Also during her fellowship there was correlation of nuclear cardiology procedures while on her clinical rotations. Dr. Liu's exposure to nuclear cardiology has also included didactic monthly conferences, case presentations, and clinical conferences during her rotation through nuclear cardiology and has involved greater than 600 myocardial perfusion examinations including planar, SPECT, and gated SPECT technique, as well as gated blood pool examinations. During her rotation through the Nuclear Medicine Department she has gained experience in quality control/assurance, dose calibration of survey meters, administration of radiopharmaceuticals, computer processing, radiation safety, as well as general operation of our facility in compliance with the NRC regulations. Dr. Liu has accrued in excess of 583 hours of clinical and technical experience in nuclear medicine while at our facility.

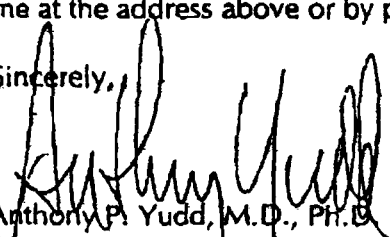
June 9, 2000  
Page 2

Dr. Liu has also gained experience in nuclear cardiology during her rotations through Deborah Heart and Lung Center. Please find attached copies of letters from Dr. Lumia of Deborah Heart and Lung Center where he describes Dr. Liu's experience best in the letter dated March 3, 2000. Dr. Liu had spent a total of four months at Deborah Heart and Lung Center. Dr. Lumia credits her with three months of clinical and work experience towards NRC licensure. This would be a total of 500 hours of clinical and work experience.

Dr. Liu accrued in excess of 1000 hours of clinical and technical experience in nuclear cardiology combining her rotations at Robert Wood Johnson University Hospital and the Deborah Heart and Lung Center in New Jersey.

If I can provide any further information regarding Dr. Liu's training you may contact me at the address above or by phone at 732-937-8612.

Sincerely,



Anthony P. Yudd, M.D., Ph.D.  
Clinical Associate Professor  
Department of Radiology  
UMDNJ-Robert Wood Johnson Medical School

Chief, Division of Nuclear Medicine  
Robert Wood Johnson University Hospital

APY/fl

Enclosure

**TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT**

**PART I -- TRAINING AND EXPERIENCE**

**Note:** Descriptions of training and experience must contain sufficient detail to match the training and experience criteria in the applicable regulations.

1. Name of Individual, Proposed Authorization (e.g., Radiation Safety Officer), and Applicable Training Requirements (e.g., 10 CFR 35.50)

Yanning LIU, MD, PH.D

2. For Physicians, Podiatrists, Dentists, Pharmacists -- State or Territory Where Licensed

Virginia, Maryland, District of Columbia (DC)

**3. CERTIFICATION**

Specialty Board	Category	Month and Year Certified

Stop here when using Board Certification to meet 10 CFR Part 35 training and experience requirements.

**4. DIDACTIC OR CLASSROOM AND LABORATORY TRAINING (optional for Medical Physicists)**

Description of Training	Location	Clock Hours	Dates of Training
Radiation Physics and Instrumentation	Institute for Nuclear Medical Education 3666 Airport Blvd. S2-101 Boulder, CO 80301	100 hrs -INSIR 100 hrs -PHY	10/20/99 10/16/99
Radiation Protection		100 hrs	3/22/2000
Mathematics Pertaining to the Use and Measurement of Radioactivity			
Radiation Biology			
Chemistry of Byproduct Material for Medical Use		100 hrs	3/26/2000
OTHER			

TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT (continued)

5a. WORK EXPERIENCE WITH RADIATION

Description of Experience	Name of Supervising Individual(s)	Location and Corresponding Materials License Number	Dates and Clock Hours of Experience
Nuclear Cardiology Training	Anthony P. Judd MD, PhD	Robert Wood Johnson University New Brunswick NJ 08903 24-10127 29-10173-02	76 1/2 mos.

5b. SUPERVISED CLINICAL CASE EXPERIENCE

Radionuclide	Type of Use	No. of Cases Involving Personal Participation	Name of Supervising Individual	Location and Corresponding Materials License Number	Dates and Clock Hours of Experience
Tc99m	TcO4 / GBR	100+	A. Judd	24-10173-02	76 1/2 mos
Tl201	Perfusion Myocardial	600+			
Tc99m Tl201	Perfusion Myocardial	600+			

TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT (continued)

6. FORMAL TRAINING (applies to Medical Physicists and Therapy Physicists)

Degree, Area of Study or Residency Program	Name of Program and Location with Corresponding Materials License Number	Dates	Name of Organization that Approved the Program (e.g., Accreditation Council for Graduate Medical Education) and the Applicable Regulation (e.g., 10 CFR 35.490)

7. RADIATION SAFETY OFFICER – ONE-YEAR FULL-TIME WORK EXPERIENCE

YES Completed 1-year of full-time radiation safety experience (in areas identified in Item 5a) under supervision of \_\_\_\_\_ the RSO for License No. \_\_\_\_\_

N/A

8. MEDICAL PHYSICIST – ONE-YEAR FULL-TIME TRAINING/WORK EXPERIENCE

YES Completed 1-year of full-time training in therapeutic radiological physics under the supervision of \_\_\_\_\_ who meets requirements for Authorized Medical Physicists; and

N/A

YES Completed 1-year of full-time work experience (for areas identified in item 5a) for \_\_\_\_\_ who meets requirements of Authorized Medical Physicists for \_\_\_\_\_ modality(ies).

N/A

9. SUPERVISING INDIVIDUAL – IDENTIFICATION AND QUALIFICATIONS

The training and experience indicated above was obtained under the supervision of (if more than one supervising individual is needed to meet requirements in 10 CFR 35, provide the following information for each) :

A. Name of Supervisor

Anthony Yudd, M.D. Ph.D

B. Supervisor is:

- Authorized User       Authorized Medical Physicist
- Radiation Safety Officer       Authorized Nuclear Pharmacist

C. Supervisor meets requirements of Part 35, Section(s) 100, 200, 300

for medical uses in Part 35, Section(s) 100, 200, 300

D. Address

Robert Wood Johnson Univ. Hosp  
New Brunswick, NJ 08903

E. Materials License Number

29-10173-02

732-937-8610



# NUCLEAR MEDICAL EDUCATION PROGRAM

## Affidavit of Academic Completion and Competency

*This document is to attest that*

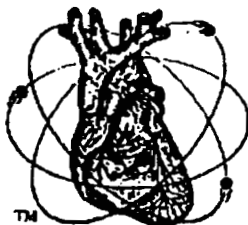
*Yaning Liu, MD, Ph.D*

*has successfully completed the didactic program*

## MEDICAL RADIATION INSTRUMENTATION

*and has provided evidence of attendance in this program and evidence of achieving the objectives of this program through examination.*

*This program provides the following levels of accomplishment:*



50 Didactic Instructional Hours (DIH)  
(In compliance with 10CFR35 and Agreement States)

5 Continuing Education Units (CEU)

50 Technical/Professional Credit specified by the  
American Pharmaceutical Association and the  
American Association of Health Physicists\*

20 October 1999

Date Class Commenced

\*Additional documentation will be provided to Regulatory Agencies upon participant request

*Charles H. Rose*

Authorized Signature

197771

Affidavit of Competency

## Institute for Nuclear Medical Education

5660 Airport Blvd., Suite 101, Boulder, Colorado 80301 — 800-548-4024

INME1132-Class II-Comp16

Certified, Approved and Regulated by the Division of Private Occupational Schools, Department of Higher Education in Colorado. Validated by the Accrediting Commission of the Accrediting Council for Continuing Education Training, a national accrediting agency listed by the US Secretary of Education. Validated by the American Council on Education, recognized by the American Association for Collegiate Registrars, Council on Post-Secondary Education.



# NUCLEAR MEDICAL EDUCATION PROGRAM

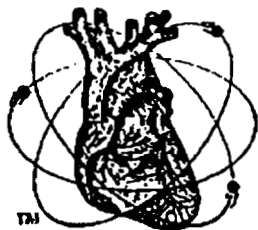
## Affidavit of Academic Completion and Competency

This document is to attest that  
*Yaning Liu, MD, Ph.D*

has successfully completed the didactic program

### PRINCIPLES OF RADIATION PHYSICS

and has provided evidence of attendance in this program and evidence  
of achieving the objectives of this program through examination.  
This program provides the following levels of accomplishment:



- 50 Didactic Instructional Hours (DIH)  
(In compliance with 10CFR35 and Agreement States)
- 5 Continuing Education Units (CEU)
- 50 Technical/Professional Credit specified by the  
American Pharmaceutical Association and the  
American Association of Health Physicists\*

\*Individual documentation will be provided to Regulatory Agencies upon participant request.

16 October 1999

Date Class Commenced

*Charles H. Rose*

Authorized Signature

197695

Affidavit of Competency

### Institute for Nuclear Medical Education

5660 Airport Blvd., Suite 101, Boulder, Colorado 80301 — 800-548-4024

INME1132-Class 1-Complete

Certified, Approved and Regulated by the Division of Private Occupational Schools, Department of Higher Education in Colorado. Validated by the Accrediting Commission of the Accrediting Council for Continuing Education Training, a national accrediting agency listed by the US Secretary of Education. Validated by the American Council on Education, recognized by the American Association for Collegiate Registrars, Council on Post-Secondary Education.

# NUCLEAR MEDICAL EDUCATION PROGRAM

## Affidavit of Academic Completion & Competency

*This document is to attest that*

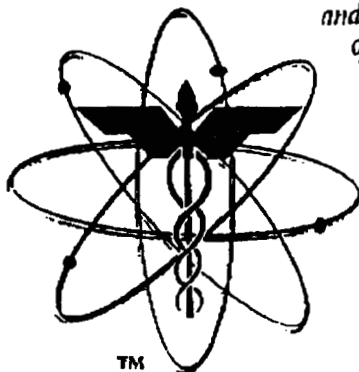
*Yaning Liu, MD, Ph.D*

*has successfully completed the didactic program*

## MEDICAL RADIATION PROTECTION

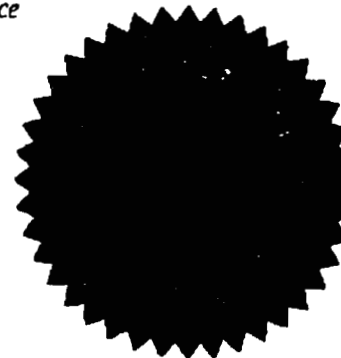
*and has provided evidence of attendance in this program and evidence of achieving the objectives of this program through examination.*

*This program provides the following levels of accomplishment:*



TM

- 5.0 Continuing Education Units (CEU)
- 50 Didactic Instructional Hours (DIH)  
In compliance with 10CFR35/AEA 73-689
- 50 Board Accepted Hours NUSPEX, NMTCB III b,  
ABMRSO, CBNC, MRLB
- 3.0 Semester Hours American Council on  
Education (ACE), American Association for  
Collegiate Registrars



*Charles H. Rose*  
Certifying Official

22 March 2000

Date Completed

198115

Certification

## Institute for Nuclear Medical Education

Certified, Approved and Regulated by the Division of Private Occupational Schools, Department of Higher Education in Colorado. Validated by the Accrediting Commission of the Accrediting Council for Continuing Education Training, a national accrediting agency listed by the US Secretary of Education. Validated by the American Council on Education, recognized by the American Association for Collegiate Registrars, Council on Post-Secondary Education. Licensed by NRC & Agreement States.  
INME1132-Class III-Comp&Comp 1000

# NUCLEAR MEDICAL EDUCATION PROGRAM

## Affidavit of Academic Completion & Competency

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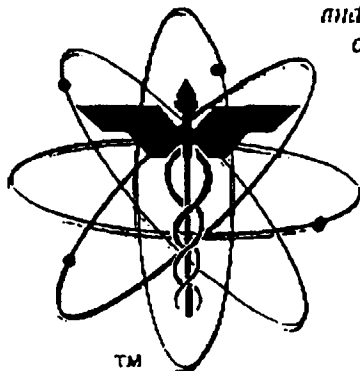
*Yaning Liu, MD, Ph.D*

*has successfully completed the didactic program*

## RADIOPHARMACEUTICALS AND CHEMISTRY

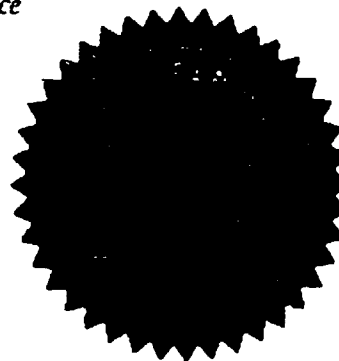
*and has provided evidence of attendance in this program and evidence of achieving the objectives of this program through examination.*

*This program provides the following levels of accomplishment:*



TM

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- 50 Didactic Instructional Hours (DIH)  
In compliance with 10CFR35/AEA 73-689
- 50 Board Accepted Hours NUSPEX, NMTCB III b,  
ABMRSO, CBNC, MRLB
- 3.0 Semester Hours American Council on  
Education (ACE), American Association for  
Collegiate Registrars



*Charles H. Rose*  
Certifying Official

26 March 2000  
Date Completed

198197  
Certification

## Institute for Nuclear Medical Education

Certified, Approved and Regulated by the Division of Private Occupational Schools, Department of Higher Education in Colorado. Validated by the Accrediting Commission of the Accrediting Council for Continuing Education Training, a national accrediting agency listed by the US Secretary of Education. Validated by the American Council on Education, recognized by the American Association for Collegiate Registrars, Council on Post-Secondary Education. Licensed by NRC & Agreement States.  
INME1132-Class IV-Comp2&Comp 100

11-20-04 10:33 FROM-west and cardiology 1-316 R. UGAR/UUS P-109

This is to acknowledge the receipt of your letter/application dated

5/22/05 (<sup>RECEIVED</sup>  
8/17/2005), and to inform you that the initial processing which includes an administrative review has been performed.

APPEND. 45-30780-01  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 137527.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.