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BARBARA ANN
KARMANOS
CANCER CENTER
At the Detroit Medical Center

February 07, 2012


U.S. Nuclear Regulatory Commission, Region III
Materials Licensing Branch
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Re: Request for Authorized Medical Physicist Status for License #21-04127-06

Dear Sir or Madame,

This letter is a request to grant Authorized Medical Physicist (AMP) Status to Liang Liang, Ph.D., for Iridium-192 in a High Dose Rate Remote Afterloading Brachytherapy device. The NRC Form 313A (AMP) is enclosed, with attestations signed by ABR certified physicists, along with supporting documents. If you require further assistance please feel free to contact our RSO Joe Rakowski at (313)745-1435. Thank you.

Sincerely



Joseph T. Rakowski
Radiation Safety Officer

NRC FORM 313A (AMP) (10-2006)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0120 EXPIRES: 10/31/2008
AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION [10 CFR 35.51]		

Name of Proposed Authorized Medical Physicist
 Liang Liang, Ph.D.

Requested Authorization(s) (check all that apply)

<input type="checkbox"/> 35.400 Ophthalmic use of strontium-90	<input type="checkbox"/> 35.600 Teletherapy unit(s)
<input checked="" type="checkbox"/> 35.600 Remote afterloader unit(s)	<input type="checkbox"/> 35.600 Gamma stereotactic radiosurgery unit(s)

PART I -- TRAINING AND EXPERIENCE
(Select one of the three methods below)

*Training and Experience, including Board Certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

- 1. Board Certification**
 - a. Provide a copy of the board certification.
 - b. Go to the table in 3.c. and describe training provider and dates of training for each type of use for which authorization is sought.
 - c. Skip to and complete Part II Preceptor Attestation.
- 2. Current Authorized Medical Physicist Seeking Additional Authorization for use(s) checked above**
 - a. Go to the table in section 3.c. to document training for new device.
 - b. Skip to and complete Part II Preceptor Attestation
- 3. Education, Training, and Experience for Proposed Authorized Medical Physicist**
 - a. Education: Document master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university.

Degree	Major Field
College or University	

- b. Supervised Full-Time Medical Physics Training and Work Experience in clinical radiation facilities that provide high-energy external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services.
 - Yes. Completed 1 year of full-time training in medical physics (for areas identified below) under the supervision of _____ who meets the requirements for an Authorized Medical Physicist.
- AND**
- Yes. Completed 1 year of full-time work experience in medical physics (for areas identified below) under the supervision of _____ who meets the requirements for an Authorized Medical Physicist.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

b. Supervised Full-Time Medical Physics Training and Work Experience (continued)

If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.

Description of Training/ Experience	Location of Training/License or Permit Number of Training Facility/Medical Devices Used+	Dates of Training*	Dates of Work Experience*
Medical Physics			
Performing sealed source leak tests and inventories			
Performing decay corrections			
Performing full calibration and periodic spot checks of external beam treatment unit(s)			
Performing full calibration and periodic spot checks of stereotactic radiosurgery unit(s)			
Performing full calibration and periodic spot checks of remote afterloading unit(s)			
Conducting radiation surveys around external beam treatment unit(s), stereotactic radiosurgery unit(s), remote after loading unit(s)			

Supervising Individual** License/Permit Number listing supervising individual as an authorized Medical Physicist

for the following types of use:

- Remote afterloader unit(s)
 Teletherapy unit(s)
 Gamma stereotactic radiosurgery unit(s)

+ Training and work experience must be conducted in clinical radiation facilities that provide high-energy external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services.

* 1 year of Full-time medical physics training and 1 year of full time work experience cannot be concurrent.

** If the supervising medical physicist is not an authorized medical physicist, the licensee must submit evidence that the supervising medical physicist meets the training and experience requirements in 10 CFR 35.51 and 35.59 for the types of use for which the individual is seeking authorization.

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(10-2006)

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AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

c. Describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Hands-on device operation	Karmanos Cancer Center Sept 1 through Nov 10, 2011 10 cases		
Safety procedures for the device use	Karmanos Cancer Center Sept 1 through Nov 10, 2011 10 cases		
Clinical use of the device	Karmanos Cancer Center Sept 1 through Nov 10, 2011 10 cases		
Treatment planning system operation	Karmanos Cancer Center Sept 1 through Nov 10, 2011 10 cases		

Supervising Individual

If training is provided by Supervising Medical Physicist, (if more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)

Qiang Liu

License/Permit Number listing supervising individual as an authorized Medical Physicist

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for the following types of use:

- Remote afterloader unit(s)
 Teletherapy unit(s)
 Gamma stereotactic radiosurgery unit(s)

If Applicable:

Authorization Sought	Device	Training Provided By	Dates of Training
35.400 Ophthalmic Use of strontium-90			

d. Skip to and complete Part II Preceptor Attestation.

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(10-2006)

U.S. NUCLEAR REGULATORY COMMISSION

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

I attest that Liang Liang has satisfactorily completed the requirements in
Name of Proposed Authorized Medical Physicist
10 CFR 35.51(a)(1) and (a)(2).

OR

2. Education, Training, and Experience

I attest that _____ has satisfactorily completed the 1-year of full-time
Name of Proposed Authorized Medical Physicist
training in medical physics and an additional year of full-time work experience as required by 10 CFR 35.51(b)(1).

AND

Second Section

Complete the following:

I attest that Liang Liang has training for the types of use for which authorization
Name of Proposed Authorized Medical Physicist
is sought that include hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system.

AND

Third Section

Complete the following:

I attest that Liang Liang has achieved a level of competency sufficient to
Name of Proposed Authorized Medical Physicist
function independently as an Authorized Medical Physicist for the following:

- 35.400 Ophthalmic use of strontium-90 35.600 Teletherapy unit(s)
- 35.600 Remote afterloader unit(s) 35.600 Gamma stereotactic radiosurgery unit(s)

AND

Fourth Section

Complete the following for preceptor attestation and signature:

I meet the requirements in 10 CFR 35.51, or equivalent Agreement State requirements for Authorized Medical Physicist for the following:

- 35.400 Ophthalmic use of strontium-90 35.600 Teletherapy unit(s)
- 35.600 Remote afterloader unit(s) 35.600 Gamma stereotactic radiosurgery unit(s)

Name of Preceptor	Signature	Telephone Number	Date
Joseph T. Rakowski, Ph.D.	<i>Joseph T. Rakowski</i>	313-745-1435	02/07/2012
License/Permit Number/Facility Name			
21-04127-06/Karmanos Cancer Center			

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Radiation Oncology, the Association of
University Radiologists, and the American Association of Physicists in Medicine
Hereby certifies that

Liang Liang, PhD

Has pursued an accepted course of graduate study and clinical work; has met certain standards
and qualifications, including passing the examinations conducted under the authority of
The American Board of Radiology, demonstrating to the satisfaction of the Board qualification
to practice; and is therefore awarded the Board's certification in the specialty of

Therapeutic Medical Physics

ABR Eligible

ABR

May 25, 2011

This diplomate of the American Board of Radiology
is now permitted to use the **ABR** mark to signify this certification.



James J. Higgins
President

Richard T. Moran
Secretary-Treasurer

Henry S. ...
Executive Director

Certificate No. H5019

Valid through 2021

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FAX

TO: NRC Region IV Materials Licensing

FAX NUMBER: 630-515-1078

FROM: Joe Rakowski

FAX NUMBER: 313-576-9637

DATE: 02/07/2012

REGARDING: Amendment

TOTAL NUMBER OF PAGES INCLUDING COVER: 7

PHONE NUMBER FOR FOLLOW-UP: 313-576-9616

COMMENTS:

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