

fn  
**RECEIVED**

JUL 30 2012

**DNMS**

4968 Rainbow Lane  
Chubbuck, ID 83202  
208.237.9730 voice  
208.237.9432 fax  
nukedoses@gmail.com

July 26, 2012

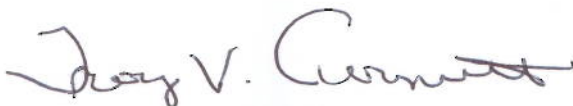
Lizette Roldán-Otero, Ph.D.  
US Nuclear Regulatory Commission, Region IV  
Division of Nuclear Materials Safety  
612 E. Lamar Blvd  
Suite 400  
Arlington, TX 76011-4125

Dear Dr. Roldán-Otero,

Please find enclosed an amendment request for RAM License #11-29216-01MD (Advanced Isotopes of Idaho). We are requesting an expedited evaluation of Dr. Mark Carson's application for approval as an authorized nuclear pharmacist.

If you have any questions or need additional information, I can be reached at (208) 406-2543 at any time. Dr. Carson can be reached at (208) 220-2243 at any time. Thank you very much.

Sincerely,



Troy Curnutt, RSO, 

**PUBLIC**

- ☐ Immediate Release  
☒ Normal Release

**NON-PUBLIC**

- ☐ A.3 Sensitive-Security Related  
☐ A.7 Sensitive Internal  
☐ Other: \_\_\_\_\_

Reviewer: fnl Date: 8/1/12

1577955

**AUTHORIZED NUCLEAR PHARMACIST TRAINING AND  
EXPERIENCE AND PRECEPTOR ATTESTATION**  
**[10 CFR 35.55]**APPROVED BY OMB: NO. 3150-0120  
EXPIRES: (05/31/2015)

Name of Proposed Authorized Nuclear Pharmacist

Mark Carson, PharmD

State or Territory Where Licensed

Idaho, License Number P6265

**PART I – TRAINING AND EXPERIENCE**  
**(Select one of the two 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 nuclear pharmacy uses.

**1. Board Certification**

- Provide a copy of the board certification.
- Skip to and complete Part II Preceptor Attestation.

**2. Structured Educational Program for Proposed Authorized Nuclear Pharmacist**

- Classroom and Laboratory Training.

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation	Purdue University	85	April 2010 - April 2012
Radiation protection	Purdue University	46	April 2010 - April 2012
Mathematics pertaining to the use and measurement of radioactivity	Purdue University	23	April 2010 - April 2012
Chemistry of byproduct material for medical use	Purdue University	40	April 2010 - April 2012
Radiation biology	Purdue University	21	April 2010 - April 2012
<b>Total Hours of Training: 215</b>			

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**AUTHORIZED NUCLEAR PHARMACIST TRAINING AND EXPERIENCE  
AND PRECEPTOR ATTESTATION (continued)**

**2. Structured Educational Program for Proposed Authorized Nuclear Pharmacist (continued)**

**b. Supervised Practical Experience in a Nuclear Pharmacy.**

Description of Experience	Location of Experience/License or Permit Number of Facility	Clock Hours	Dates of Experience*
Shipping, receiving, and performing related radiation surveys	Advanced Isotopes of Idaho 4968 Rainbow Ln Chubbuck, ID 83202 License Number: 11-29216-01MD	330	April 2006 - July 2012
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides	Advanced Isotopes of Idaho 4968 Rainbow Ln Chubbuck, ID 83202 License Number: 11-29216-01MD	570	April 2006 - July 2012
Calculating, assaying, and safely preparing dosages for patients or human research subjects	Advanced Isotopes of Idaho 4968 Rainbow Ln Chubbuck, ID 83202 License Number: 11-29216-01MD	1840	April 2006 - July 2012
Using administrative controls to avoid medical events in administration of byproduct material	Advanced Isotopes of Idaho 4968 Rainbow Ln Chubbuck, ID 83202 License Number: 11-29216-01MD	310	April 2006 - July 2012
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures	Advanced Isotopes of Idaho 4968 Rainbow Ln Chubbuck, ID 83202 License Number: 11-29216-01MD	330	April 2006 - July 2012
<b>Total Hours of Experience: 3380</b>			
Supervising Individual <i>Heyman</i> Cathy Heyman, PharmD, ANP			

**c. Go to and complete Part II Preceptor Attestation.**



**AUTHORIZED NUCLEAR PHARMACIST 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:**

**Board Certification**

☐ I attest that \_\_\_\_\_ has satisfactorily completed the requirements in  
Name of Proposed Authorized Nuclear Pharmacist

10 CFR 35.55(a)(1), (a)(2), and (a)(3) and has achieved a level of competency sufficient to function independently as an authorized nuclear pharmacist.

**OR**

**Structured Educational Program**

☒ I attest that Mark Carson, PharmD has satisfactorily completed a 700-hour structured  
Name of Proposed Authorized Nuclear Pharmacist

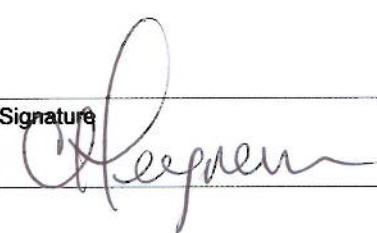
educational program consisting of both 200 hours of classroom and laboratory training, and practical experience in nuclear pharmacy, as required by 10 CFR 35.55(b)(1) and has achieved a level of competency sufficient to function independently as an authorized nuclear pharmacist.

**Second Section**

**Complete the following for preceptor attestation and signature:**

I am an Authorized Nuclear Pharmacist for Advanced Isotopes of Idaho,  
Nuclear Pharmacy or Medical Facility

#11-29216-01MD  
License/Permit Number

Name of Preceptor <u>Heyneman</u> Cathy Cashmore, PharmD, ANP	Signature 	Telephone Number <u>208 3903961</u>	Date <u>7/23/12</u>
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# PURDUE UNIVERSITY

memo

TO: Mark Carson  
FROM: Kara Duncan Weatherman, PharmD, BCNP, FAPhA  
DATE: April 27, 2012  
SUBJECT: Nuclear Pharmacy Certificate Program Completion

Mark –

Congratulations on completing the Purdue University Nuclear Pharmacy Certificate Program! Enclosed are a number of documents that will be necessary as you apply for Authorized Nuclear Pharmacist status:

- **COMPLETION LETTER:** this is an official letter (on Purdue letterhead) stating that you have successfully completed the training program and met all of the requirements that have been set forth by both the Nuclear Regulatory Commission and Purdue University. I generally send two original copies – one for submission and one for your records.
- **FINAL CERTIFICATE:** a copy of this can also be included in your request for AU status and if you so desire, can be framed for your personal use.
- **SYNOPSIS OF CLOCK HOURS:** this document summarizes the hourly breakdown of your training in the categories specified by the U.S. Nuclear Regulatory Commission. Please note, page 5 of the document, entitled “Training Received in Basic Radioisotope Handling Techniques”, summarizes the total breakdown of course content for both the distance and campus sessions in chart form. This document contains my signature as Director of Nuclear Pharmacy Training Programs.

Keep in mind, Purdue certifies your 200 hours of didactic training only – you will need to have an Authorized Nuclear Pharmacist from your facility (or from previous training experiences if you are counting hours earned during a summer internship or other experience) submit an affidavit indicating 500 hours of practical experience. Please let me know if we can be of any additional assistance in this process. It is usually helpful if you make copies of all of the documents and keep them in your personal files in case you change jobs and need to resubmit your AU status to a different state. I also keep electronic files of all paperwork associated with the program. Just give us a call if you ever need them.

In conclusion, I would like to wish you the best as you embark on this new phase of your career. Nuclear pharmacy is a fantastic area of practice, and hopefully, you will find that you enjoy it as much as I have in my career. I would encourage you to continue your education in nuclear medicine and nuclear pharmacy. An excellent method is to become active in your local nuclear medicine technology organization or to become a member of the American Pharmacist Association's section on nuclear pharmacy. Purdue's Certificate Program has given you a foundation that you can build on, and our faculty remains available to you if you have questions at a later date. Please do not hesitate to contact us if we can be of ANY help.

Enclosures

# **NUCLEAR PHARMACY CERTIFICATE PROGRAM**

## ***Synopsis of Clock Hours of Training***

***Mark Carson  
Certificate Program #70  
Campus session: May, 2010***

**College of Pharmacy  
Department of Pharmacy Practice  
Nuclear Pharmacy Programs  
Purdue University  
West Lafayette, Indiana 47907**

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# **Nuclear Pharmacy Certificate Program Outline:**

## **Contents:**

1. Program Concept
2. Synopsis of Clock Hours of Training
3. DVD and Workbook (Self-Study Portion) Clock Hours
4. Campus Portion Laboratory and Lecture Clock Hours
5. Instructional Staff

## **Abbreviations Used:**

RPI:	Radiation Physics / Instrumentation
RP:	Radiation Physics
MA:	Math
RB:	Radiation Biology
RC:	Radiochemistry



## **Nuclear Pharmacy Certificate Program Concept**

The College of Pharmacy at Purdue University offers a Certificate Program in Nuclear Pharmacy. The goal of the certificate program is to provide fundamental information to post-graduate pharmacists that will serve as a foundation for attaining competency as practitioners in nuclear pharmacy. The program follows the guidelines for nuclear pharmacy training prepared by nuclear pharmacists in the American Pharmaceutical Association, Section on Nuclear Pharmacy Practice.

This student completed the videotaped distance learning portion of the certificate program. This training module utilizes self-study concepts, including lectures on videotape and correlated reading assignments. The nuclear pharmacy manager, or other qualified nuclear pharmacist at the practice site, serves as the clinical instructor and mentor for the pharmacist in training. This portion is self-paced by the trainee with regular examinations returned to Purdue to assist in monitoring the learning process.



Form Updated 08/11

TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES\*

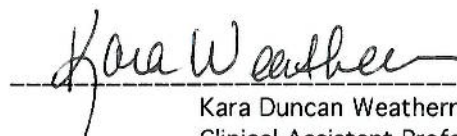
Trainee: MARK CARSON

Date issued: April 27, 2012

				Breakdown of Course Content in Clock Hours				
Location of Training	Date(s) of Attendance	Nuclear Pharmacy Certificate Program	Total Clock Hours of Course	Radiation Physics & Instrumentation	Radiation Protection	Math Pertaining to Radioactivity	Radiation Biology	Radio-pharmaceutical Chemistry
Purdue University	April 2010 - April 2012	DVD-Workbook	150	51	33	13	21	32
	May, 2010	On-Site	65	34	13	10	0	8
Total Hours Received			<b>215</b>	85	46	23	21	40
Hourly breakdown by topic								

\* This form is representative of that which is used to apply for an NRC license amendment for an authorized user.

Director of Nuclear Pharmacy Training Programs: \_\_\_\_\_



Kara Duncan Weatherman, PharmD, BCNP, FAPhA  
Clinical Assistant Professor of Pharmacy Practice  
Purdue University  
Nuclear Pharmacy Programs

**Nuclear Pharmacy Certificate Program**  
**DVD and Workbook (Self-Study Portion) Clock Hours**

DVD	Instructor	Hours
Physics and Overview Disc 1-4	Dr. Stanley M. Shaw	RP/I: 11 RP: 4 MA: 1
Radiation Protection Disc 1-2	Dr. Paul Ziemer	RP: 8
Instrumentation Disc 1	Dr. Kara Weatherman	RP/I: 4
Radiopharmaceuticals Disc 1-3	Dr. Kara Weatherman	RP: 3 RB: 3 RC: 6
Math Review Disc 1	Dr. Kara Weatherman	MA: 4
Radionuclide Generators Disc 1	Ms. C. Anne Smith	RP/I: 2 MA: 2
Kit Preparation Disc 1	Dr. Kara Weatherman	MA: 4
Quality Control Disc 1	Ms. C. Anne Smith	RP/I: 2 MA: 1 RC: 1
Radiopharmaceutical Formulations (Disc 1)	Mr. James Ponto	RP/I: 1 MA: 1 RC: 2
Health Physics and Recordkeeping (Disc 1)	Dr. Brigitte McGhee	RP/I: 2 RP: 2
Radiation Biology Disc 1-3	Dr. Stanley M. Shaw	RP/I: 3 RB: 9
Late Effects of Ionizing Radiation (Disc 1)	Dr. William R. Widmer	RP/I: 1 RB: 3
Radiation Safety in Pregnant and Breastfeeding Patients (Disc 1)	Mr. James Ponto	RP/I: 1 RP: 3
Adverse Drug Reactions (Disc 1)	Mr. James Ponto	RP/I: 1 RP: 2 RB: 1
Radiopharmaceutical Updates (Disc 1-3)	Dr. Richard Kowalsky	RP/I: 9 RB: 3
Blood Pool Imaging (Disc 1)	Dr. Ronald Calahan	RP/I: 1 MA: 1 RC: 2
Clinical PET	Dr. Laura Boles Ponto	RP/I: 1 RP: 1 RC: 2
Nuclear Pharmacy Regulations (Disc 1-2)	Dr. Stanley M. Shaw	RP: 8
Radiopharmaceutical Chemistry (Disc 1-4)	Dr. Mark A. Green	RC: 16

## Nuclear Pharmacy Certificate Program On-Campus Portion Clock Hours

Session	Instructor	
On-Campus portion:	Dr. Kara Weatherman	RP/I: 34 RP: 13 MA: 10 RB: 0 RC: 8

## Nuclear Pharmacy Certificate Program Instructional Staff

Dr. Stanley M. Shaw, Ph.D.  
Professor of Nuclear Pharmacy  
Purdue University  
West Lafayette, Indiana 47097

Dr. Paul Ziemer, Ph.D.  
Professor Emeritus of Health Physics  
Purdue University  
West Lafayette, Indiana 47097

Dr. Kara Weatherman, PharmD, BCNP, FAPhA  
Assistant Professor of Nuclear Pharmacy  
Purdue University  
West Lafayette, Indiana 47907

Ms. C. Anne Smith, M.S., B.C.N.P.  
Nuclear Pharmacy Program Director  
Purdue University  
West Lafayette, IN 47907

Mr. James A. Ponto, M.S., B.C.N.P.  
Division of Nuclear Medicine  
University of Iowa Hospitals and Clinics  
Iowa City, Iowa 52242

Brigette McGhee  
Staff Pharmacist  
Central Pharmacy Services, Inc  
Jacksonville, FL

Dr. William R. Widmer, D.V.M.  
Associate Professor of Diagnostic Imaging  
Department of Veterinary Clinical Sciences  
School of Veterinary Medicine  
Purdue University  
West Lafayette, Indiana 47907

Dr. Richard J. Kowalsky, PharmD, BCNP, FAPhA  
Associate Professor Pharmacy and Radiology  
University of North Carolina  
Chapel Hill, North Carolina 27599

Dr. Ronald Callahan, PhD  
Harvard Medical School  
- Associate Professor of Radiology  
Massachusetts General Hospital  
- Director of Nuclear Pharmacy  
Boston, Massachusetts 02114

Dr. Laura Boles Ponto, PhD  
Division of Nuclear Medicine  
University of Iowa Hospitals and Clinics  
Iowa City, Iowa 52242

Dr. Mark A Green, PhD  
Professor of Industrial and Physical Pharmacy  
Division of Nuclear Pharmacy  
Purdue University  
West Lafayette, Indiana 47907

April 27, 2012

Mark Carson  
Advanced Isotopes of Idaho  
4968 Rainbow Drive  
Chubbuck, ID, 83202

Dear Mark,

We are pleased to provide the enclosed certificate to recognize formally your completion of the Purdue University Nuclear Pharmacy Certificate Program. You have successfully completed all requirements of both the distance and on-campus components of the program as set forth by the Nuclear Regulatory Commission and Purdue University. We enjoyed the brief opportunity to share our knowledge from the world of academia. We wish you the very best for a gratifying and successful professional career.

As you continue on in your career, please do not hesitate to let us know if we can be of any assistance to you – we consider you part of the “Purdue family” and we look forward to hearing from you in the future!

Sincerely,



Kara Duncan Weatherman, PharmD, BCNP, FAPhA  
Clinical Assistant Professor of Pharmacy Practice  
Nuclear Pharmacy Programs  
Purdue University





# PURDUE UNIVERSITY

WEST LAFAYETTE, INDIANA

COLLEGE OF PHARMACY  
DEPARTMENT OF PHARMACY PRACTICE  
NUCLEAR PHARMACY PROGRAMS

THIS CERTIFICATE IS AWARDED TO

*Mark Carson*

AS EVIDENCE OF COMPLETION OF THE

NUCLEAR PHARMACY CERTIFICATE PROGRAM

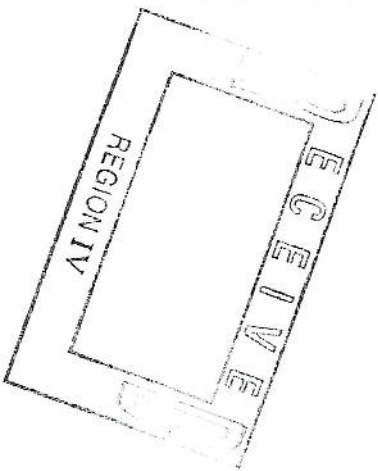
*April 27, 2012*

*Kara D. Weatherman*  
Director of Nuclear Pharmacy Training Programs

577955

ced isotopes of Idaho  
368 Rainbow Ln.  
Idaho, ID 83202

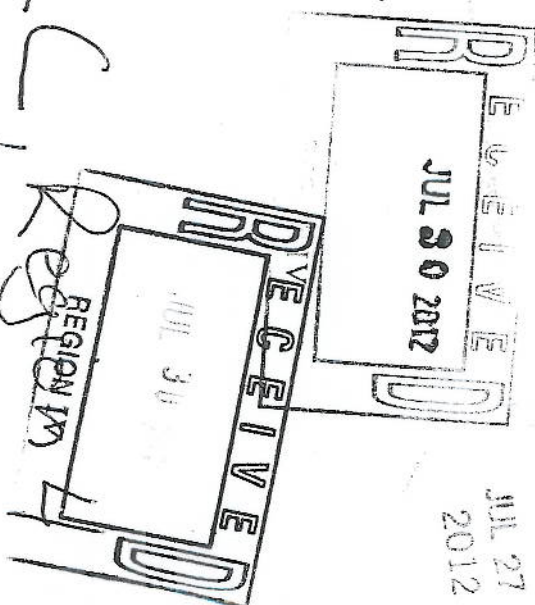
JUL 27  
2012



577955

JUL 27  
2012

US NRC, Region IV



JUL 27  
2012

Division of Nuclear Materials  
Attn: Lizette Rolan-Otero  
612 E. Lamar Blvd  
Suite 400  
Arlington, Texas

76011-4125





DATE  
08/01/2012

## NAME AND ADDRESS OF APPLICANT AND/OR LICENSEE

Advanced Isotopes of Idaho  
ATTN: Troy Curnutt, RT(N)  
Radiation Safety Officer  
4968 Rainbow Lane  
Chubbuck, Idaho 83202

## LICENSE NUMBER

11-29216-01MD

## MAIL CONTROL NUMBER

577955

## LICENSING AND/OR TECHNICAL REVIEWER

ch

This is to acknowledge the receipt of your:

☒ LETTER and/or ☐ APPLICATION DATED: 07/26/2012

The initial processing, which included an administrative review, has been performed.

☒ AMENDMENT ☐ TERMINATION ☐ NEW LICENSE ☐ RENEWAL

- ☒ There were no administrative omissions identified during our initial review.
- ☐ This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.
- ☐ Your application for a new NRC license did not include your taxpayer identification number. Please fill out NRC Form 531, located at the following link:

<http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf>

Send the completed NRC Form 531, by facsimile, to the following number: (301) 415-5387

A copy of your action has been emailed to our License Fee and Accounts Receivable Branch, in our Headquarters office in Rockville, MD. You will be contacted separately if there is a fee issue involved.

Your application has been assigned the above listed **MAIL CONTROL NUMBER**. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, our contact information is listed below:

Region IV  
U. S. Nuclear Regulatory Commission  
DNMS/NMSB - B  
1600 E. Lamar Boulevard  
Arlington, TX 76011-4511  
(817) 200-1103 or (817) 200-1140

✓ 8/1/12

BETWEEN:

Accounts Receivable/Payable  
and  
Regional Licensing Branches

[ FOR ARPB USE ]  
INFORMATION FROM LTS

Program Code: 02500  
Status Code: Pending Amendment  
Fee Category: 2B 3C 3P  
Exp. Date: 12/31/2015  
Fee Comments:  
Decom Fin Assur Req: N

## License Fee Worksheet - License Fee Transmittal

### A. REGION

#### 1. APPLICATION ATTACHED

Applicant/Licensee: ADVANCED ISOTOPES OF IDAHO  
Received Date: 07/30/2012  
Docket Number: 3037048  
Mail Control Number: 577955  
License Number: 11-29216-01MD  
Action Type: Amendment

#### 2. FEE ATTACHED

Amount: \_\_\_\_\_

Check No.: \_\_\_\_\_

#### 3. COMMENTS

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

### B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / / )

1. Fee Category and Amount: \_\_\_\_\_

#### 2. Correct Fee Paid. Application may be processed for:

Amendment: \_\_\_\_\_

Renewal: \_\_\_\_\_

License: \_\_\_\_\_

#### 3. OTHER \_\_\_\_\_

Signed: \_\_\_\_\_

Date: \_\_\_\_\_