



GE Healthcare

101 Carnegie Center
Princeton, New Jersey 08540
USA

T 609 514 6000

NMSB 2

4 January 2006

Nuclear Materials Safety Branch 1
Division of Nuclear Materials Safety
US Nuclear Regulatory Commission, Region I
King of Prussia, PA 19406

03035949

RE: Radioactive Material License 37-30722-01MD

Dear Sir/Madame:

Please allow this letter to serve as notice that Medi-Physics, Inc., dba GE Healthcare wishes to make the following changes to the above referenced license:

1. Please add Byyan M. Kull R.Ph., as an authorized nuclear pharmacist in Condition 10. Mr. Kull's Commonwealth of Pennsylvania Pharmacist's license is attached as well as the necessary training and experience.

Should you have any additional questions or are in need of additional information, please feel free to contact me at 609-514-6647.

Sincerely,

Richard A. Hughes
Corporate Radiation Safety Officer

6h:01:10:10:49

RECEIVED

138204

NUCLEAR MATERIALS-002



Pennsylvania Department of State Bureau of Professional and Occupational Affairs



License Verification

Person Information

Name: BRYAN MICHAEL KULL

Address(city,state zipcode): Forty Fort PA 18704

Employer Information

No Information Found

License Information

Type: Pharmacist **Secondary Type:** N/A

Number: RP044106L

Profession: Pharmacy

Status: Active

Obtained By: Application

Issue Date: 10/23/1998

Expires: 9/30/2006

Last Renewed: 8/31/2004

Standing: This license is in good standing.

Disciplinary action history: No disciplinary actions were found for this license.

[Return to Licensee Search](#) | [Back to Results](#)

December 20, 2005

Bryan Kull
GE Healthcare
1067 Hanover Street
Wilkes Barre, PA 18706

Dear Bryan:

We are pleased to provide the enclosed certificate to recognize formally your completion of the Nuclear Pharmacy Certificate Program. 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,



Steve Piepenbrink, R.Ph., BCNP
Director of Nuclear Pharmacy Engagement
Division of Nuclear Pharmacy



Division of Nuclear Pharmacy, Department of Industrial and Physical Pharmacy

Heine Pharmacy Building, Room 308 ■ 575 Stadium Mall Drive ■ West Lafayette, IN 47907-2091
(765) 494-1441 ■ Fax: (765) 496-3367 ■ URL: www.purdue.edu/nuclearpharmacy

NUCLEAR PHARMACY CERTIFICATE PROGRAM

Synopsis of Clock Hours of Training

School of Pharmacy and Pharmacal Sciences
Department of Industrial and Physical Pharmacy
Division of Nuclear Pharmacy
Purdue University
West Lafayette, Indiana 47907



Nuclear Pharmacy Certificate Program Outline

Contents:

1. Program Concept
2. Synopsis of Clock Hours of Training
3. Videocassette 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 School of Pharmacy and Pharmacal Sciences 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.

There are two distinct phases of the certificate program. The first part 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. Successful completion of the didactic phase qualifies the trainee to attend a two-week long training session at Purdue. While on campus, the trainee participates in laboratory exercises and has opportunities for personal interaction with the instructors during lectures presented. Certification is awarded to those trainees who have completed the program and are able to demonstrate their knowledge and competence by examination in each of the key areas addressed by the program.

TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES*

Name: Bryan Kull

Location of Training	Date(s) of Attendance	Nuclear Pharmacy Certificate Program	Total Clock Hours of Course	Breakdown of Course Content in Clock Hours								
				Radiation Physics & Instrumentation		Radiation Protection		Math Pertaining to Radioactivity		Radiation Biology		Radio-pharmaceutical Chemistry
				A	B	A	B	A	B	A	B	A
Purdue University		Video-Workbook	150	54		37		11		23		25
		On-Site	73	26		19		13		4		11
Column "A" refers to a Lecture/Laboratory Course			223	80		56		24		27		36
Column "B" refers to a Supervised Laboratory Experience			TOTAL HOURS	80		56		24		27		36

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



Director, Nuclear Pharmacy Certificate Program

Nuclear Pharmacy Certificate Program

Videocassette and Workbook (Self-Study Portion) Clock Hours

<u>Instructor</u>	<u>Material</u>	<u>Clock</u> <u>Hours</u>
Dr. Stan Shaw	<u>Physics and Overview</u>	RPI 30
	Radiation Energy	RP 2
	Atomic Structure	MA 4
	Nuclides	RC 12
	Radioactive Decay and Half-Life	
	Ideal Radionuclide for Imaging	
	Modes of Radioactive Decay	
	Interaction of Ionizing Radiation with Matter	
	Radiation Detection Methods	
	Radiopharmaceuticals: Characteristics and Chemistry	
	Central Nervous System	
	Pulmonary System	
	Liver and Hepatobiliary System	
	Spleen	
	Cardiac Imaging	
	Skeletal System	
	Renal System	
	Endocrine System	
	Miscellaneous Procedures and Radiopharmaceuticals	
	In Vivo Radiopharmaceuticals Not Requiring Imaging	
Radiopharmaceuticals Used in Therapy		

Dr. Robert Landolt	<u>Radiation Protection</u>	RPI	2
	Terms and Units	RP	14
	Protection from External Exposure		
	Portable Survey Instruments		
	Personnel Monitoring		
	Internal Dose Calculations		
	Contamination Control		
	Waste Management		
	Packaging, Labels and Placards		
	10 CFR Standards for Protection Against Radiation		
	10 CFR Notices, Instructions, and Reports to Workers		
Mr. Jim Ponto	<u>Drugs & Radiopharmaceuticals</u>	RPI	4
	Drugs & Radiopharmaceuticals, Parts 1 and 2:	RP	4
	<i>Interactions and their effect on diagnostic accuracy of</i>	MA	4
	<i>Nuclear Medicine Procedures</i>	RC	8
	Drugs & Radiopharmaceuticals, Part 3:		
	<i>Interventions used to improve differential diagnosis in</i>		
	<i>Nuclear Medicine Imaging</i>		
	Criteria for Product Selection		
	Instrument Quality Assurance		
	Technetium Chemistry; Radiolytic Decomposition		
	Pediatric Dosage Calculations		
	Adverse Reactions to Radiopharmaceuticals		
	Record Keeping		
Preparation and Dispensing of Radiopharmaceuticals			
Formulation Problems			

Anne Smith	Radionuclide Generator: Mo-99/Tc-99m Generator	RPI	3
	Quality Control Testing of Radiopharmaceuticals	RP	2
		MA	1
Dr. Richard Kowalsky	Radiopharmaceuticals for Brain Imaging	RPI	5
	Radiopharmaceuticals for Heart Imaging Update	RP	5
	Radiopharmaceuticals for Kidney Imaging Update	RC	5
	Radiopharmaceuticals for Treatment of Bone Pain	RB	1
	Monoclonal Antibodies for Radioimmunodiagnosis Somostatin Receptor Imaging		
Dr. Wayne Kessler	<u>Instrumentation</u>	RPI	8
	Spectrometry	MA	2
	Counting Efficiency		
	Coincidence Loss		
	Background		
	Liquid Scintillation Counting		
	Statistics of Radioactivity		
Dr. Paul Simms	Radionuclide Production, Part 1	RPI	4
	Radionuclide Production, Part 2		
Dr. Stan Shaw	<u>Radiation Biology and Protection</u>	RB	20
	Energy Transfer	RP	8
	Mechanisms of Change		
	Aqueous Radiation Chemistry		
	Target Theory and Dose-Response		
	Radiation Effects on Macromolecules		
	Radiation Effects on Cells		
	Acute Effects		
	Delayed Effects		
Genetic Effects			
Dr. William Widmer	Late Effects of Ionizing Radiation	RB	2

Nuclear Pharmacy Certificate Program

On-Site Laboratory Schedule

<u>Instructor</u>	<u>Laboratory</u>	<u>Clock Hours</u>	
Dr. Mark Green	Chemistry of Metal-Labeled Radiopharmaceuticals	RC	5
	PET Radiopharmaceutical Chemistry	RPI	1
	PET Imaging and Concept		
	Radionuclide Generator for PET		
Dr. Kara Duncan	Counting Statistics in Nuclear Pharmacy Practice	MA	3
	Iodine Compounding and Instrumentation	MA	2
		RB	2

Nuclear Pharmacy Certificate Program

On-Site Lecture Schedule

<u>Instructor</u>	<u>Topic</u>	<u>Clock Hours</u>
Dr. Stan Shaw	Regulatory Agencies 10 CFR Parts 19 and 20	RP 4
	Film Badge Dosimetry	RP 2
Mack Richard	10 CFR Part 35 Medical Regulations	RP 2
	Performance Criteria for Radiobioassay	RB 2
Steve Piepenbrink	Dose Calibrator	RPI 3
	Shipping and Receiving	MA 1 RP 2
	Elution of the Tc-99m Generator and Quality Control of the Eluate	RPI 2 MA 2
	Radiochemical Purity Testing	RPI 2 RC 1
	Preparation and Dispensing of Selected Radiopharmaceuticals	RPI 2 MA 2
	Aseptic Technique and Sterility Testing	RC 3
	DOT Hazardous Materials Handling	RP 2
	Gamma Ray Scintillation Spectrometry I	RPI 4
	Gamma Ray Scintillation Spectrometry II	RPI 3
	Multichannel Analyzer	RPI 3
	Gamma Camera Instrumentation	RPI 3
	Review of Math Used in Nuclear Pharmacy	MA 3
		RB 2
	Formed Element Labeling and Aids Safety Procedures	RC 2
	Contamination and Decontamination	RP 3
Basic Radiation Safety	RPI 3	
G.M. Counting	RP 1	
	RPI 3	

Nuclear Pharmacy Certificate Program

Instructional Staff

Videocassette - Workbook

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

Dr. Robert Landolt, Ph.D.
Professor of Health Physics
Purdue University
West Lafayette, Indiana 47097

Dr. Wayne V. Kessler, Ph.D.
Professor of Bionucleonics
Purdue University
West Lafayette, Indiana 47907

Dr. Paul C. Simms, Ph.D.
Professor of Physics
Purdue University
West Lafayette, Indiana 47097

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

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

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

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

On-Site

Dr. Mark A. Green, Ph.D.
Professor of Nuclear Pharmacy
Purdue University
West Lafayette, Indiana 47097

Steve Piepenbrink, R.Ph. BCNP
Director of Nuclear Pharmacy Engagement
Purdue University
West Lafayette, Indiana 47097

Mr. Mack Richard, M.S.
Radiation Safety Officer
Indiana University Medical Center
Indianapolis, Indiana 46202

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

Dr. Kara Duncan, PharmD, BCNP
Adjunct Assistant Professor
Purdue University
West Lafayette, Indiana

PURDUE UNIVERSITY
WEST LAFAYETTE, INDIANA

SCHOOL OF PHARMACY AND PHARMACEUTICAL SCIENCES
DEPARTMENT OF INDUSTRIAL AND PHYSICAL PHARMACY
DIVISION OF NUCLEAR PHARMACY

This certificate is awarded to

Bryan Kull

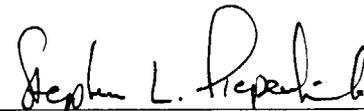
as evidence of completion of the

NUCLEAR PHARMACY CERTIFICATE PROGRAM

December 20, 2005



John M. Pezzuto
Dean, School of Pharmacy
and Pharmaceutical Sciences



Stephen L. Piepenbrink
Director of Nuclear Pharmacy Engagement