

# HOWARD UNIVERSITY

RADIATION SAFETY OFFICE

May 8, 2019

Br. 2

U.S. Nuclear Regulatory Commission – Region 1  
2100 Renaissance Blvd, Suite 100  
King of Prussia, PA 19406 – 2713  
Attn: Betsy Ullrich, Senior Health Physicist

Through: Anthony K. Wutoh, Ph.D., R.Ph.  
Provost and Chief Academic Officer  
Howard University

03011063

Subject: **Amendment Request for Research License No. 08-00386-19, to add Isotopes.**

On behalf of the Radiation Safety Committee (RSC), I am requesting an amendment to our research license (No. 08-00386-19), to add the isotopes shown in the attached sheet.

This amendment request is being submitted due to a research proposal received by the Radiation Safety Office (RSO); as our current research license does not cover these isotopes.

Thank you for your time and consideration with this matter. Please do not hesitate to contact me at my email [satya.bose@howard.edu](mailto:satya.bose@howard.edu), or phone (202) 806-7216, should you require any additional information.

Sincerely,



Satya Bose, Ph. D., DABR  
Director of Radiation Safety &  
Radiation Safety Officer  
Chief Medical Physicist, Radiation Oncology

cc: Alice A. Mahan  
Management Representative to RSC

Sergei A. Nekhai, Ph.D., Professor  
Chair, RSC



2041 Georgia Avenue, NW  
Cancer Center, Room 323  
Washington, DC 20060

p: (202) 806-7216  
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612138  
NMSS/RGN1 MATERIALS-002

### List of byproduct materials for conducting research

Byproduct material	Physical and chemical form	Requested Annual Limit use (mCi)	Authorized Use
Fluorine-18	Organic liquid, aqueous liquid or solid & free $^{18}\text{F}$ or fluorinated compounds.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Copper- 64	Aqueous liquid & free $^{64}\text{Cu}^{2+}$ or its compounds.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Gallium- 67	Aqueous liquid & free $^{67}\text{Ga}^{3+}$ or its compounds.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Germanium- 68	Epoxy matrix, solid, leak test <5 nCi.	1	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Gallium- 68	Aqueous liquid & $^{68}\text{Ga}^{3+}$ or its complexes.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Zirconium-89	Aqueous liquid & $^{89}\text{Zr}^{4+}$ or its complexes.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Sodium-22	Epoxy matrix, solid, leak test <5 nCi.	1.5	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Indium-111	Aqueous liquid & $^{111}\text{In}^{3+}$ or its complexes.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Lutetium-177	Aqueous liquid & $^{177}\text{Lu}^{3+}$ or its complexes.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Iodine-124	Organic liquid or aqueous liquid & free $^{124}\text{I}$ or its complex.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students
Iodine- 125	Organic liquid or aqueous liquid & free $^{125}\text{I}$ or its complex.	200	For research and devolvement as defined in 10 CFR 30.4 including animal studies; in-vitro studies; teaching and training of students



ACKNOWLEDGEMENT - RECEIPT OF CORRESPONDENCE

<b>Name and Address of Applicant and/or Licensee</b>  Satya R. Bose, Ph.D. Director of Radiation Safety Howard University Radiation Safety Office Cancer Center, Room 323 2041 Georgia Avenue, NW Washington, D.C. 20060	<b>Date</b> May 10, 2019
	<b>License Number(s)</b> 08-00386-19
	<b>Mail Control Number(s)</b> 612138
	<b>Licensing and/or Technical Reviewer or Branch</b> Commercial, Industrial, R&D, and Academic Branch

This is to acknowledge receipt of your:  Letter and/or  Application Dated: May 8, 2019

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 complete and submit NRC Form 531, Request for Taxpayer Identification Number, located at the following link: <http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf>  
 Follow the instructions on the form for submission.

The following administrative omissions have been identified:

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 I**  
**U. S. Nuclear Regulatory Commission**  
**Division of Nuclear Materials Safety**  
**2100 Renaissance Boulevard, Suite 100**  
**King of Prussia, PA 19406-2713**  
**(610) 337-5260, (610) 337-5313,**  
**(610) 337-5398, (610) 337-5239**