AUGUSTA UNIVERSITY

APPLICATION FOR NON-HUMAN RESEARCH PROTOCOLS THAT USE RADIOACTIVE MATERIAL AND RADIATION PRODUCING DEVICES

PART A. General Information

Complete this form if you intend to conduct non-human research that utilizes radioactive material and radiation-producing devices. If you require assistance in completing this form, contact the Radiation Safety Office at (706)721-9826 or RADIATIONSAFETYOFFICE@augusta.edu.

Principal Authorized User: _____ Department: _____

Email Address: _____ Phone number: _____

Campus address: _____

Title and any identifying numbers of the research study:

_____

Expected start date: _____ Radioactive material/radiation work location: _____

PART B. Application to Utilize Radiation Producing Devices

☐ N/A

Complete Part B for non-human use research proposals involving radiation producing devices, such as diagnostic x-ray systems, CT scanners, and fluoroscope systems. If you are not using radiation producing devices, check the N/A box and skip to Part C.

I propose to use:

☐ Standard radiographic system
☐ Cone beam CT Scanner
☐ Fluoroscopy
☐ NOMAD Hand-held X-ray
☐ CT Scanner
☐ Micro CT Scanner
☐ Linear Accelerator

Location of radiation producing device(s) :

Is this area properly shielded?

◯ YES ◯ NO ◯ Not sure

Indicate what methods will be used to reduce the radiation exposure to personnel:

Protocol attached: ☐ The protocol should be in sufficient detail to permit a critical evaluation of the methods for conducting the research and the safety controls established.

Will a certified radiologic technologist operate the radiation producing device?

◯ YES ◯ NO

IF NOT,

Is the operator of the equipment properly trained?

◯ YES ◯ NO

(At least 6 hours of appropriate instruction per *Rules and Regulations for X-Rays, Chapter 290-5-22, Rule .06 (8), Diagnostic Services Unit, July 12, 1989*). **If YES, attach copy of training certification.**

List personnel designated to use/operate the radiation producing device:

Part C. Application for Research Protocols that Utilize Radioactive Material

☐ N/A

Complete Part C when a non-human research protocol involves the use of radioactive material at any time. If you are not using radioactive material, check the N/A box and skip to Part D.

Provide the project title and the estimated termination date:

Provide a brief description of the experiment and attach details of proposed protocols to the application:

I propose to use radioactive materials for:

☐ In-vitro studies ☐ Animal studies

I propose to use the following radioactive material:

Radionuclide:	Chemical Form:	Physical form:	Requested Possession Limit (mCi):
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Radionuclide:	Chemical Form:	Physical Form:	Requested Possession Limit (mCi):

Typical activities used (mCi uCi) or on a daily basis:

Maximum activities used for special operations (i.e. iodinations, dilutions). If a stock solution of a radionuclide is to be diluted or separated into aliquots, describe the following in detail: (1) method of dilution, (2) subsequent aliquot amounts, (3) and the facility where this is to be done-room, hood, etc. All containers must be properly labeled - radionuclide, amount, when used, who, etc. Describe subsequent labeling procedures indicating (1) what is to be labeled, (2) how it is to be accomplished, (3) where it is to be used, and (4) assay procedures to be used. (Attach additional pages as necessary.)

Justify your requested possession limit for each isotope based on above description of typical and maximum use:

Describe equipment available for protection of workers from radioactive contamination and from external radiation fields (i.e. tabletop shields, lipped trays, etc.):

Will the experiment generate gases or vapors?

◯ YES ◯ NO

If yes, describe:

Will steps be taken to trap and collect radioactive vapors or gases?

◯ YES ◯ NO

If yes, describe:

Will there be any vapor/gas release to the environment?

◯ YES ◯ NO

If yes, provide quantitative upper limit for each release as well as yearly total (Approval by RSO required).

Radioactive waste; Check applicable categories. If item is not checked, it will be understood that no such waste will be generated.

☐ Solid Waste

Describe waste container(s) to be used in laboratory:

☐ Non-hazardous liquid scintillation vials

Approximate number per month:

State supplier and product name of scintillant:

☐ Hazardous liquid scintillation vials

Approximate number per month:

(Approval by RSO required.) Note: Disposal costs are assessed to the Principal Investigator.

☐ Bulk liquid

Approximate monthly volume:

Will bulk liquid meet EPA/RCRA criteria for disposal?

◯ YES ◯ NO

☐ Radioactive animal carcasses

Maximum activity per animal:

Maximum specific activity by isotope:

Maximum number of carcasses per week:

Average weight per animal:

Expected number of carcasses per year:

Estimate freezer capacity required:

☐ Other radioactive contaminated biological waste

Characterize the waste by activity, isotope, maximum specific activity, biological description, and storage requirements:

☐ Disposal by radioactive decay

If the waste will be stored in your lab for the purpose of decaying to a non-radioactive level before transfer to RSO, describe storage facility:

☐ Mixed waste (Radioactive waste that includes chemical, biological, or hazardous waste.) Note: Mixed waste disposal costs are assessed to the Principal Investigator.

Mixed waste (i.e. carcinogenic, infectious, explosive, etc.) may present handling problems for the RSO staff, and may also require prior clearance with the commercial rad waste disposal facility. Describe nature of hazard and precautions/procedures to be used to identify, package, and safe handling of the material. (**All waste containing biohazards must be detoxified before it is transferred to Radiation Safety.**)

Use of radioactive material in animals

Will radioactive material be used for in-vivo animal experiments?

◯ YES ◯ NO

Types of animals to be used: | Activity to be administered: | Route of radionuclide administration

What fraction of the radioactivity will present in:

air | urine | feces | carcass

Maximum number of radioactive animals housed at one time: | Where will radioactive animals be housed? | How long will the animals contain radioactivity?

I am familiar with the Radiation Safety Guide requirements for handling radioactive animals.

◯ YES ◯ NO

Identify any other procedures under this protocol that involve hazardous operations or present special problems (i.e. grinding, work with loose powders under mechanical agitation, potential for large energy releases, plant studies). Give sufficient detail on methods of use of radioactive material to provide a basis for an evaluation of health hazards and contamination potential.

List all the rooms where radioactive materials will be used or stored.

Attach a diagram of each room indicating the locations of radionuclide use, desks, fume hoods, hot sinks, storage areas, and radioactive waste storage. State if lab is lockable.

Laboratory surveys and portable survey instruments.

List portable survey instruments available:

Make/Model/Serial # :	Type (e.g. GM, NaI):	Instrument Owner:
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Radionuclide storage facilities.

Located in lab?

◯ YES ◯ NO

If NO, where?

Type of storage unit:

☐ Refrigerator or Freezer ☐ Cabinet

☐ Other

How is radioactive material secured against unauthorized removal (e.g. lockable storage cabinet, room locked after work hours)? When the Principal Authorized User or authorized lab personnel are not present, the door must be locked or the storage unit must be locked.

Where will sealed sources normally be located, and where will they be when not in use?

Participating Personnel.

List the persons who will work on this project:

Is radiation safety training current for the PAU and all participating personnel?

◯ YES ◯ NO

Part D. Training and Experience of the Principal Authorized User

Note: If this is an initial AU/AU Health proposal application, please attach a copy of your resume to the proposal.

Training

List below any courses you have had that covered such topics as radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity and radiation biology.

Institution:	Course Title/Number:	Total hours:	Date of Attendance:
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Institution:	Course Title/Number:	Total Hours:	Date of Attendance:

Experience

List below all experience you have had working with radiation sources, particularly with the types and activities requested in this application.

Isotope:	Max. Activity:	Institution:	Dates:	Type of Use:
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Were you ever approved as a Principal Authorized User to use radionuclides or listed on an NRC or agreement state radioactive materials license?

◯ NO

◯ YES - Where?

Part E. Signature and Submittal

If this electronic application and supplementary information are submitted to the Radiation Safety Office as email attachments **from the applicant**, a written signature is not required. If this application is submitted by someone other than the applicant, the applicant should be copied on the email submission or the applicant may send a separate email to the Radiation Safety Office (radiationsafety@augusta.edu) indicating the applicant's approval of the submitted information.

Signature: Date: