



The Lab Rat NEWS

April 2015

Restricted Areas and Shared Laboratory Spaces

Restricted areas are areas to which access is limited by the Licensee to protect individuals from exposure to radiation and radioactive materials (RAM). Restricted areas in shared laboratories usually have designated radiation work areas. These areas are marked by “**Caution Radioactive Materials**” signs and with radioactive material labels and stickers as shown in the photo below.

Some areas that are commonly shared with RAM users are

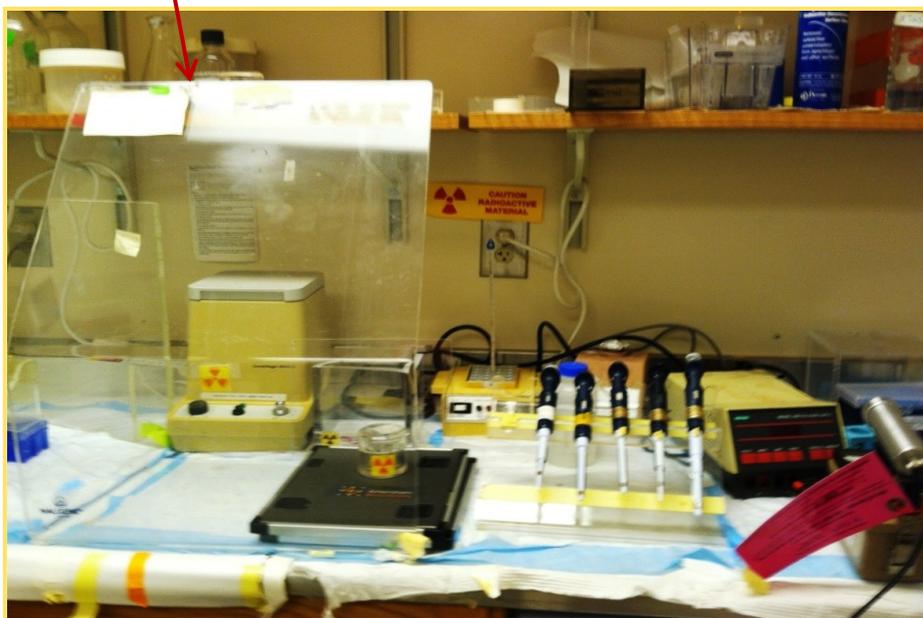
- Laboratory work bench spaces
- Cold rooms
- Equipment rooms
- Liquid scintillation counting rooms
- Autoclave rooms



Most isotopes used in research laboratory settings are high and low energy beta and low energy gamma emitters; therefore radiation exposure hazard for laboratory workers is minimal. However, contamination is the primary hazard in RAM research laboratories.

Workers can minimize potential exposures by managing **Time**, **Distance**, and **Shielding**.

- Minimize your **Time** spent around the radiation source.
- Maximize the **Distance** between you and the source.
- Use appropriate **Shielding** as shown in the photo below (plexiglass shielding for high energy beta emitters).



Below are steps laboratory workers need to follow while working in a close proximity with RAM users.

- 1) **Pay attention to marked areas with Radioactive Material Labels.** For non-rad users, please contact your Radiation Safety Building Liaison for more information about autoclave rooms with RAM postings.
- 2) Before working in RAM marked areas, ensure that you have prior training and authorization.
- 3) Avoid removing glassware, pipets, and other equipment and items from RAM marked areas.
- 4) Clean spills in RAM marked areas only if you are trained.
- 5) Read the Safety Data Sheet (SDS) for the isotope you are working with.

Training

Most of EHSO's Trainings are available online:

ehso.emory.edu.

Rad Safety Training

2nd Tuesdays at
10:00am (monthly).

Lab Safety Training

3rd Thursdays at
10:00am (monthly).

Chemical/ Radioactive Waste

[Full Schedule here...](#)

All **chemical** waste pick up should be requested by emailing

chemwaste@emory.edu.

All **radioactive** waste pick up should be requested via EHS Assist pick-up.

Chemical waste disposal inventory form and/or **radioactive** waste inventory form should accompany all waste containers at the time of pick-up.

PPE

Choice to be based on potential exposures involved:

Eye: Glasses, goggles & face shields.

Gloves: Appropriate for the type of procedure.

Clothing: Gowns, lab coats, aprons, coveralls.

Respirators: Appropriate for the type of procedure.

Potential Sources of Exposure

Below are common sources of radiation you will find in RAM areas. Handling these items could result in exposure or contamination. Always use Time, Distance, and Shielding to minimize your exposure.

			
<p>Packages containing RAM</p>	<p>Radioisotopes vials</p>	<p>Radioactive Waste Containers (can only be used for radioactive waste. No non-rad waste allowed).</p>	

In the Event of Radioactive Material Spill

1. Notify everyone in the lab of the spill area.
2. Prevent unauthorized access to the area.
3. For small spills, refer to your "Just in Time - A Guide to Campus Emergencies" posted in the lab.
4. For large spills, immediately contact EHSO for assistance at 404-727-5922 to get help with the cleanup.



Eye Wash Testing

Eyewash Stations should be tested and documented once a month by lab personnel

Certifications

Certifications required annually:
Biosafety Cabinets,
Geiger Meters and
Chemical Fume Hoods.

Fire Extinguishers

Visual fire extinguisher inspections conducted monthly:

- A. Is it present and mounted in its proper location?
- B. Is it readily accessible?
- C. Initial and date attached tag.

If it appears to need servicing contact the Maintenance HELP line at 7-7463

Tell us how we are doing!

The newsletter has a new home. Every individual article is now hosted [online!](#)

Got something to share? [Tell us!](#) Post comments, related articles/links, and safety concerns.

Feel free to also send your comments to biosafe@emory.edu.

We look forward to reading your ideas and comments!

Building Liaisons

[Click here](#) to find your building's Radiation and Research liaisons.

NEW UPDATE

NIH Guidelines

The "Guidelines for working with replication-incompetent Adeno-Associated (AAV), recombinant Adeno-Associated (rAAV), Lentivirus and Adeno viral vectors in lab and animal research" (http://www.ehso.emory.edu/content-guidelines/LentiviralGuide_1.pdf) have been updated to reflect current NIH/OBA guidance.

What was the change in the NIH Guide?
Appendix B-1 (http://osp.od.nih.gov/sites/default/files/NIH_Guidelines.html#_Toc351276292) assessed AAV and rAAV as Risk Group 1 (RG1) agents. RG1 agents are not associated with disease in healthy adult humans.

What is the change in the Emory University Guidelines for working with AAV and rAAV vectors?
The use of AAV and rAAV vectors in animals has been downgraded to ABSL1 **if the following conditions are met:**

- Transgene does not express an oncogenic protein or toxin.
- AAV/rAAV is generated without using adenovirus or any other helper virus of human origin.
- AAV/rAAV is propagated in insect cell lines or is purified sufficiently before use. The method and assessment of purification needs to be documented.

What has NOT changed?
BSL2/ABSL2 must be used when working with AAV and rAAV when:

1. Transgenes express an oncogenic protein or toxin.
2. Helper virus of human origin is used to generate AAV/rAAV.
3. AAV/rAAV is propagated in human cell lines **without** further purification before use.

Please Read—

Signature indicates: I have read and I understand the information in this issue of Lab Rat Newsletter. Use an additional sheet of paper for more signatures, if needed and attach to this document.

- This newsletter is a tool to help fulfill a legal requirement for ongoing safety training.
- Supervisors are responsible for ensuring that individuals in their area have read and understood the information that applies to their area.
- The signed newsletter should be placed into the PI's EHSO Lab Safety Binder.

Signature Here

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