

**INSTRUCTIONS TO PRINCIPAL INVESTIGATORS FOR COMPLETING  
RADIATION USE AUTHORIZATION NON-HUMAN (RUA) APPLICATION FORM**

OCTOBER 2002

1. **What is a RUA?** A RUA is a document describing a Principal Investigator's (PI's) research at UCSF and, when approved by the Radiation Safety Committee (RSC), provides authorization for you, the PI, to conduct that research.
2. **Who must apply for a RUA?** If your research involves the use of radionuclides, you must have a RUA application approved by the Radiation Safety Committee. Please see Chapter 4 of the UCSF Radiation Safety Manual. The Radiation Safety Manual and all RUA forms are available on the EH&S web site at <http://www.ehs.ucsf.edu>.

**The RUA Application.** The Non-animal use RUA application consists of two forms. (1) *Radiation Use Authorization Non-Human* and (2) *Universal Hazardous Material Use Form (Training Experience Verification)* forms. If you plan to use animals in your research, you must complete the *Animal Involvement in the Laboratory Animal Resource Center form*. Your RUA application must include these forms.

3. **How to Complete the RUA-Non Human Application:**

- a. Principal Investigator - This is the responsible user, and the researcher who controls the support of the project. The Principal Investigator has the ultimate responsibility for all work with radionuclides performed under the project.
- b. Laboratory Supervisor - The individual directly supervising the use of radionuclides and the daily activities of the laboratory. Although the PI bears ultimate responsibility, he or she may delegate the routine surveillance work. This designee must have experience in the use of ionizing radiation. The laboratory supervisor will be the contact person for the EH&S Departmental Safety Advisor and if needed State Inspectors.

Project Description – Briefly describe the project(s) and in particular, outline the laboratory techniques that will be used, such as hybridization protocols (Northern, Southern and Western), cell harvesting techniques and labeling, iodination, pulse labeling, chromatography, DNA cloning, etc. Please indicate radiation detection equipment available that will be used to monitor radioactive contamination. Indicate whether or not animals will be used. Please include sufficient information regarding radiation safety to allow the Radiation Safety Committee to evaluate the adequacy of your radiation safety precautions.

- c. Authorized Users – In order to become an authorized user of radionuclides at UCSF you must (1) read the UCSF Radiation Safety Training Manual (2) complete *Universal Hazardous Material User Form (Training & Experience Verification)* (3) call EH&S at 476-1300 to schedule your attendance in an EH&S training class (Laboratory Safety for Researchers). You must pass a written exam after the training.
- d. Use Locations – List all rooms where radionuclides are likely to be used or stored. Please indicate shielding/equipment available. Also indicate the radionuclide delivery room. Attach a lab diagram of all use rooms indicating use and non use areas.
- e. Radionuclides To Be Used – Specify all radionuclides, amount per experiment, amount per purchase, and total amount to be possessed at one time. NOTE: Please ensure that the purchase amounts on-hand will not exceed your total possession amount. Specify YES or NO if the use of the radionuclide is volatile. If the operation involves iodination, state the iodination fume hood ID# used. Indicate the Operation of the radionuclide as follows:
  - I. Simple Wet Operations (e.g. preparation of stock solutions, dilutions, autoradiography)
  - II. Normal Chemical/Biochemical Operations (e.g. enzyme reactions, electrophoresis, chromatography, harvesting cells, filtrations, titrations, precipitations, mechanical pipetting)
  - III. Simple Dry Operation (non-respirable particles) (e.g. manipulation of powder transfer to dry precipitates)
  - IV. Complex Wet Operations (e.g. distillations, evaporation of dryness, animal feeding or injection)
  - V. Complex Dry Operations (may produce respirable particles; e.g. solids grinding, crushing, mixing, sieving, machining)
  - VI. Volatile Operations (e.g. iodination with I-125, I-131, tritiated water, etc.)
- f. Sealed Sources- List any sealed sources the PI may possess.
- g. Radiation Detection Instruments – List equipment owned by the PI only, do not include shared equipment belonging to other investigators.
- h. Billing Contact – Indicate accounting recharge number for radioactive waste disposal and a billing contact.
- i. Signatures – This application requires a signature of the Principal Investigator.