A. General Considerations.

1. Introduction: This policy describes procedures to be followed to minimize the risk of exposure when working with infectious or potentially infectious agents.

2. Scope of Activities: The medical center's medical research program encompasses a variety of research projects including human studies, animal studies and bench-top studies. Some of these projects may involve contact with infectious agents exposing personnel to a risk of infection.

3. Oversight: Each research protocol is reviewed and approved by the Research and Development (R&D) Committee before work on the protocol can commence. The R&D Committee relies upon the actions of its various sub-committees to help evaluate research protocols. These subcommittees, Human Studies Subcommittee, the Subcommittee for Animal Studies, the Subcommittee for Research Safety and the Subcommittee for Biosafety, all evaluate research protocols and recommend to the R&D Committee their approval or disapproval. Areas of concern arising during the review process must be addressed before approval is obtained.

B. Personnel Health

1. Personnel health policies are instituted for the purpose of protecting the employee's health and to prevent the spread of infection within the hospital and research facilities.

2. Personnel with draining wounds or lesions must be seen by the Employee Health practitioner prior to starting on duty. Lesions that might come into contact with laboratory specimens must be completely covered if the employee stays on duty.

3. Medical Center Exposure Control Plan
   a. This VA Medical Center complies with the Occupational Safety and Health Administration (OSHA) Blood borne Pathogens Regulations (29 CFR 1910.1030).
   
   b. The Medical Center Exposure Control Plan is found in Professional Services Memorandum VIII-18 of the Infection Control/Exposure Control Manual. The manual can be accessed on the ZVAMC Intranet site using Quick Navigation Links.
   
   c. In the Exposure Control Plan, all employees in the Research Service have been assessed as to their risk of potential exposure to blood borne pathogens, such as the viruses that cause AIDS, Hepatitis B and Hepatitis C. All lab personnel and specified office personnel are considered at risk.
   
   d. All employees at risk for an exposure are eligible for the Hepatitis B vaccine:
      
      (1) The Hepatitis B vaccine is administered in a series of three injections given over a six month period of time. The vaccine is administered through the Employee Health Clinic. Individuals wanting to be vaccinated should inform their supervisor prior to reporting to the Employee Health Clinic.
      
      (2). The employee may decline the vaccine; however, a special OSHA form must be signed. The form notes that the employee can still receive the vaccine in the future, at no charge, should the individual change his or her mind.

   e. Employees performing tasks where there could be anticipated exposure to blood and body fluids, or encountering equipment/items contaminated with blood and body fluids are to
wear appropriate personal protective equipment (PPE) and use the principals of Standard Precautions.

C. Personal Hygiene

1. Technical personnel are required to appear for work in clean clothes. Personnel are expected to maintain good personal hygiene (bathing, hair washing, etc.), and practice good health habits, i.e. hand washing after use of toilet, keeping hands and objects (pen, pencils) away from face and mouth.

2. Any employee of Research Service that has the potential for being exposed to any patient’s blood or body fluid (i.e. examination of a specimen) is eligible for receiving the Hepatitis B vaccine thru the Employee Health Clinic.

D. Patient Contact

1. Personnel in direct contact with patients must wash their hands well, both before and after each patient contact, in accordance with the Hospital Infection Control Policy. Instructions posted on patient isolation doors are to be strictly followed.

2. Long hair, including beards, must be contained when in patient contact.

3. Standard precautions require that barriers be established between the individual and the potential infectious agent using Personal Protective Equipment (PPE) when there is potential exposure to blood or fluids visibly contaminated with blood. These barriers include:
   a. GLOVES-vinyl or latex (latex needed in antineoplastic therapy) are to be worn whenever contact/exposure to blood or body fluids is anticipated.
   b. GOWNS OR PLASTIC APRONS-to protect the uniform when there is a high potential for contamination (cleaning up a grossly incontinent patient).
   c. EYE PROTECTION-minimum standard is full lensed glasses with side shields or basic safety glasses which are available from Supply, Processing and Distribution (SPD). Glasses can be washed with soap and water and dried with tissues. Goggles are also available from SPD.
   d. MASKS-to protect nose and mouth from contaminated droplets. Masks and eye wear are used in combination to protect the face.

4. Research supplies and instruments which are processed i.e., sterilized by research equipment located in Building 70, shall not be used in connection with human subjects. Only those instruments processed through the hospital will be used on human subjects.

E. Laboratory Work Areas

1. Physicians and techs are required to wear white lab coats over street clothes while in the work areas. When leaving the lab area to go to the hospital area, a fresh clean lab coat should be worn. Change back into a "work" lab coat upon returning to the lab.

2. If clothes become soiled from specimens, they must be removed and scrub gown or suit worn for the remainder of the day. This is done to prevent the carrying of possible pathogenic organisms on clothing to clean areas of the hospital and to the employee's home. For the same reasons, long hair and long beards must be contained (covered or tied back securely) while working in the laboratory work areas.

3. Thorough hand washing must be done by all persons after handling any specimens including after the removal of gloves.
4. Hands must be washed thoroughly after removing any PPE before leaving the laboratory for coffee breaks, lunch, meetings, other areas of the hospital and home.

5. NO EATING, DRINKING OR SMOKING IS ALLOWED IN THE LABORATORY WORK AREAS.

F. Patient Care

1. Standard Precautions are required in providing care to any patients:

2. Extraordinary care must be taken to avoid accidental wounds from sharp instruments contaminated with potentially infectious material and to avoid contact of open skin lesions with material from patients.

3. Gloves are to be worn when handling blood specimens, blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.

4. Gowns are to be worn when clothing may be soiled with body fluids, blood, secretions, or excretions.

5. Hands are to be washed after removing protective barriers or before leaving patients rooms. Hands should also be washed thoroughly and immediately if they become contaminated with blood.

6. Blood and other specimens are to be labeled prominently with a special warning, such as a universal biohazard sticker. If the outside of the specimen container is visibly contaminated with blood, it will be cleaned with a facility approved disinfectant. All blood specimens are to be placed in a second container, such as an impervious bag, for transport. The container or bag should be examined carefully for leaks or cracks.

7. Blood spills are to be cleaned up promptly with an appropriate disinfectant solution.

8. Articles soiled with blood will be placed in an impervious red bag prominently labeled with a biohazard symbol before being sent for processing and disposal. Alternatively, such contaminated items are to be placed in plastic bags of particular color designated solely for disposal of infectious wastes by the hospital.

9. Disposable items should be disposed of in accordance with hospital policy listed in VIII-19 of the Infection Control Manual for disposal of infectious wastes.

10. Reusable items are to be reprocessed in accordance with hospital policies. Lensed instruments are to receive high level disinfection (manual wash, rinse, dry and soaking in glutaraldehyde) after use on any patients.

11. Needles are not to be bent or recapped after use, but are to be promptly discarded in Sharps puncture-resistant containers used solely for such disposal. Needles are not to be reinserted into their original sheathes before being discarded into the container, since this is a common cause of needle injury. Needle disposal units are not to be overfilled. The filled containers are to be red bagged. New units can be obtained from the Research Service Supply office.

12. Disposable syringes and needles are preferred. Only needle-locking syringes or one-piece needle-syringe units are to be used to aspirate fluids from patients, so that collected fluid can be safely discharged through the needle, if desired. If reusable syringes are employed, they are to be decontaminated before reprocessing.

13. A private room is indicated for patients who are too ill to use good hygiene, such as those with profuse diarrhea, fecal incontinence, or altered behavior secondary to central nervous system infections.
G. Infection Control in Research Laboratories:

1. The following precautions are required for persons performing laboratory tests or studies on clinical specimens or other potentially infectious materials:
   a. Mechanical pipetting devices are to be used for the manipulation of all liquids in the laboratory. Mouth pipetting is not to be allowed.
   b. Needles and syringes should be handled as stipulated above.
   c. Laboratory coats, gowns, or uniforms are to be worn while working with potentially infectious materials and are to be discarded appropriately before leaving the laboratory.
   d. Gloves are to be worn to avoid skin contact with blood, specimens containing blood-soiled items, body fluids, excretions, and secretions, as well as surfaces, materials, and objects exposed to them.
   e. All procedures and manipulations of potentially infectious material are to be performed carefully to minimize the creation of droplets and aerosols.
   f. Biological safety cabinets (Class I or II) and other primary containment devices (e.g., centrifuge safety cups) are advised whenever procedures are conducted that have a high potential for creating aerosols or infectious droplets. These include centrifuge, blending, sonicating, vigorous mixing, and harvesting infected tissues for animals or embryonated eggs. Fluorescent activated cell sorters generate droplets that could potentially result in infectious aerosols. Translucent plastic shielding between the droplet collecting area and the equipment operator will be used to reduce the presently uncertain magnitude of the risk. Primary containment devices are also used in handling materials that might contain concentrated infectious agents or organisms in greater quantities than expected in clinical specimens.
   g. Laboratory work surfaces are to be decontaminated with the recommended hospital disinfectant following any spill of potentially infectious material and at the completion of work activities.
   h. All potentially contaminated materials used in laboratory tests are to be decontaminated, preferably by autoclaving, before disposal or reprocessing.
   i. All personnel should wash their hands following completion of laboratory activities and remove of ANY PPE before leaving the laboratory.

2. The following additional precautions are advised for studies involving experimental animals inoculated with tissues or other potentially infectious materials (potentially pathogenic to humans):
   a. Laboratory coats, gowns, or uniforms are to be worn by personnel entering rooms housing inoculated animals. When handled, animals may disturb excreta in their bedding. Therefore, personnel attending inoculated animals should wear molded surgical masks and goggles or other equipment sufficient to prevent potentially ineffective droplets from reaching the mucosal surfaces of their mouths, noses, and eyes when handling them.
   b. Personnel are to wear gloves for all activities involving direct contact with experimental animals and their bedding and cages. Such manipulations are to be performed carefully following Veterinary Medical Unit procedures to minimize the creation of aerosols and droplets.
   c. Necropsy of experimental animals is to be conducted by personnel wearing gowns, gloves, masks, and safety glasses. If procedures generating aerosols are performed, masks and goggles should be worn.
Infection Control Policy

H. Care of Equipment

1. Potentially infected (contaminated) equipment in the laboratory area is either sprayed with Rocleen (1:128) or disinfected with the recommended disinfectant from EMS or autoclaved as appropriate.

2. Sterilizers and autoclaves are to be tested at least weekly by either spore strips or "sterigage" tabs for efficiency of operation. The results of these tests are to be logged in equipment log book, (which shall be available for inspection).

3. Laboratory hoods are to be inspected for efficiency as follows:
   a. Biological at 6 months.
   b. Fume at 1 year.
   c. Or as specified by protocol approved by the Research Safety Subcommitt

I. Laboratory Housekeeping & Sanitation

1. Table tops are washed off by laboratory personnel at the end of the day with the EMS recommended solution or household bleach. (1:10 dilution)

2. Special cleaning of the laboratory room walls and vents are accomplished through work orders to Facility Management.

3. The inside of refrigerators and incubators are cleaned with detergent every six months or whenever soiled.

J. Treatment of Infectious Wastes

1. The following procedures will be followed for infections wastes:
   a. Bags: All infectious waste is to be discarded in a Red plastic bag or a bag with the universal biohazard symbol for infectious waste.
   b. Sharp's Containers: Will be used for disposal of needles, scalpels and other sharp disposable items. Each lab which uses these items will have an approved sharp's container in it.
   c. Glassware: All contaminated disposable glassware is to be bagged and autoclaved before disposal. The bags are to have large X's of autoclave tape on each side which will indicate "Autoclaved" when the bags are autoclaved.
2. All of the above will be delivered to the VMU on a daily basis and placed in the red plastic infection waste containers for pick up by the waste contractor. This includes material which has been autoclaved.