



Stem Cell Center
Research for Better Health

Stem Cell Core Operating Policy
University of California, Riverside

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UCR Stem Cell Core Operating Policy

Overview

- The UCR Stem Cell Core Facility is used only for stem cell research and teaching. The activities of the core are funded by the California Institute for Regenerative Medicine (CIRM) and in part by grants to UCR investigators and private donations.
- The UCR Stem Cell Core facility is outfitted with three state-of-the art cell culture rooms, two microscope rooms, two equipment rooms, an analytical room, a workstation room, a molecular biology room, reagent and supplies storage room, two offices, conference room and a foyer for educational and outreach purposes.
- The UCR Stem Cell Core Facility is operated by a staff consisting of Professor Prue Talbot (Director), Dr. Iva Afrikanova (Academic Coordinator), Maria Valle (Lab Assistant) and Frank Harrington (Administrative Assistant). The UCR Stem Cell Core has an Oversight Committee that works with the staff to facilitate Core operation.
- The Core offers the following research services:
 - Quality controlled cells and reagents
 - State of the art analytical and cell culture equipment
 - Communal laboratory space
 - Training for working with human pluripotent stem cells (HPSC) and analytical equipment
 - Technical assistance, guidance and protocols for derivation, maintenance and differentiation of HPSC
 - Strategies for translating laboratory findings with stem cells into clinical therapy
 - Advice and guidance on documentation of approvals for working with HPSCs
 - Sales & Services for purchasing expendable supplies
 - Liquid Nitrogen Storage Space to stem cell core members and outside clients
 - During 2014, the Core will offer karyotyping services for UCR Stem Cell Center affiliated researchers.
- In the UCR Stem Cell Core facilities, some of the services and equipment are not subject to charges.
- Core scientists also develop and validate new technologies for human stem cell growth, differentiation, and manipulation.
- Core service begins with an initial consultation. Researchers who wish to perform a stem cell project in the Stem Cell Core should schedule an appointment with Dr. Iva Afrikanova to discuss planned usage.

Code of Conduct

- All users will be required to fill-out a Code of Conduct and a Check Out form before using the Core.
- Users must provide the Core with an FAU to which charges for services, supplies, and equipment use can be made. This must be done before using the Core.
- Users must read and understand the Policy and Code of Conduct before working in the Core.

Hours of Operation

- Standard operating hours are 8:00 AM- 6:00 PM, Monday through Friday.
- The Core may be accessed at other times, but only after training and checkout procedures have been completed and only by individuals working with stem cells.

Access to the Core

- The doors to the Core are locked at all times.
- All access to the Core is through the front door.
- The back exit door is for emergency purposes and deliveries.
- Researchers who have received appropriate training and a check out may be given key (FOB) access to the Core. Key access may be limited to (1) the microscope and analytical room only, or (2) the microscope, analytical room and the culture suites depending on the needs and training of each individual.
- Individuals will be charged for replacement of lost keys (FOBs).
- Keys cannot be transferred or shared. They are issued to single users.
- Individuals who share keys will forfeit key access.

Scheduling use of the Core Facilities

- The Stem Cell Core Facility is intended for **stem cell research only** with the exception of the Sales and Service and the use of Luminex 200, which are open to other researchers on campus.
- Individuals wishing to use the culture facilities must be trained and checked out in stem cell culture techniques.
- All users must be approved for access to the imaging, analytical and/or sterile areas in the Core by the Academic Coordinator. Users are expected to follow standard operating procedures (SOP) of the Core and good laboratory practices (GLP).
- Once a user has been checked out, the use of the equipment can be scheduled through the UCR Stem Cell Core website under Scheduling <http://stemcellcore.ucr.edu/>
- **If an individual signs up for a piece of equipment and does not appear by 20 minutes after their start time, they automatically forfeit access for that time slot and another individual may take their slot.**

Sales and Services

- The Stem Cell Core sells expendable items, media, and research tools (growth factors, antibodies etc.) to campus researchers. These items are usually available at significant savings through the Core.
- Sales & Services purchases must be made through a member of the Core Staff.
- Users must provide an active FAU to the Core before using Sales and Service every year.
- Research labs using Sales and Services will receive an itemized list of their purchases each month.
- For Sales and Services assistance, contact Maria Valle at maria.valle@ucr.edu to check for reagent availability and to schedule a time for pick-up.

Getting Started

- **The Core is only available for working on projects involving stem cells** except for using the Luminex 200 and Sales and Services, which are open to other researchers on campus.
- Principal Investigators, who are interested in using the UCR Stem Cell Core have to first notify the Stem Cell Core Director (Dr. Talbot) and Academic Coordinator (Dr. Afrikanova) of their intention to use the Core facility. Subsequently, they will receive an application form to fill in and submit back via e-mail to the Core Academic Coordinator.

Based on the submitted information, they will be guided through the steps necessary to obtain all documentation required for working with stem cells and/or using stem cell Core services. For more information on documentation please refer to Work in the Stem Cell Core Facility part in Regulatory Review Requirements for Human Stem Cells table.

- All investigators who use the Stem Cell Core have to read and understand the UCR Stem Cell Core Policy, which will be published on the Stem Cell Core website <http://stemcellcore.ucr.edu/> under General Policy.
- In addition, all investigators who use the Stem Cell Core have to sign the Code of Conduct. For more information, please read the section on the Code of Conduct. The Code of Conduct form can be downloaded from the Stem Cell Core website <http://stemcellcore.ucr.edu/> under Getting Started.
- Principal Investigators will be responsible for all of their employees (students, postdocs, researchers and technicians) who use the Core and must ensure compliance with Core regulations, procedures, and good laboratory practices as well as ethical guidelines when working with human cells. This means that all educational courses required by the University of California for working in BSL-2 facility with human pluripotent stem cells are the Principal Investigator's responsibility.
- All UCR Stem Cell Core users are advised to sign in the Stem Cell Center listserv to receive and send e-mails related to the activities at the Core. After signing, they will obtain access to the ucrstemcellcenter@lists.ucr.edu e-mail.

Equipment usage

- To utilize equipment at the UCR Stem Cell Core, you must be approved by the UCR Stem Cell Core Director and Academic Coordinator. Please refer to Getting Started section of the policy.
- Approved UCR Stem Cell Core facility members must undergo training by the Academic Coordinator and/or Stem Cell Core staff before equipment usage is assigned. Training will be provided for complex equipment and is a requirement for novice researchers.
- Equipment standard operating procedures (SOPs) will be posted next to all major pieces of equipment and MUST be complied with at all times.
- Manuals will be provided in the equipment rooms next to the instrument, on the desktop of workstations and computers connected to the equipment or directly to user e-mail upon training and user request.
- Members MUST schedule for equipment at the UCR Stem Cell Core website <http://stemcellcore.ucr.edu/> under Scheduling. Please refer to section Scheduling for more information.
- Equipment users MUST sign all log sheets and provide all required information.

- Equipment users are expected to ask for assistance if they are unable to operate the equipment.
- Equipment users are required to report broken equipment and any problems that they experienced during instrument operation to the UCR Stem Cell Core staff.
- UCR Stem Cell Core staff is required to inform Core users via the ucrstemcellcenter@list.ucr.edu e-mail regarding equipment problems and scheduled services.
- Failure to comply with equipment usage policy may result in suspension of services.

Training

- One-on-one training
The UCR Stem Cell Core staff provides one-on-one training in a range of human pluripotent stem cell techniques and state of the art equipment. This training is available to UCR researchers. Participants must have prior cell culture experience as the maintenance of human pluripotent stem cells involves advanced techniques.
- Structured courses
Each year, the UCR Stem Cell Core offers a 5 day intensive course (CMDB 211). The course provides lectures and practical experience on methodology and major techniques used in human pluripotent stem cells culture and differentiation. This course is available to all UCR and Loma Linda University students and researchers. Courses will be announced each year on the Stem Cell Core website <http://stemcellcore.ucr.edu/> under Courses and Events. The course is taken by students who require training with human pluripotent stem cells for their research projects.
- Bootcamp training
Several times during the year, the UCR Stem Cell Core provides bootcamp training to novice Core users to introduce them to the GLP and SOP in the Core facility.
- Seminars
The UCR Stem Cell Center and Core organizes a variety of seminars presented by invited speakers from industry and academia. For more information please go to UCR Stem Cell Core website <http://stemcellcore.ucr.edu/> under Courses and Events section and News.

Protocols

The UCR Stem Cell Core distributes a variety of protocols for maintaining human pluripotent stem cells, differentiation, and characterization. The Core protocols will be published on our website <http://stemcellcore.ucr.edu/>. These protocols reflect the methodologies used by the UCR Stem Cell Core. The guidelines written within them are based on observation made mainly

at the UCR Stem Cell Core Facility. We acknowledge that there are many relevant published methodologies, in addition to the protocols we provide. We do not guarantee our methodologies will work outside of the facility.

Publications Involving the Core

Stem Cell Core staff who contribute to the acquisition and analysis of experimental data, beyond the provision of cells, reagents, training and technical assistance, may be listed as an author on any resulting publications at the discretion of the PI in charge of the project.

Investigators requiring information on cells, quality control analysis or equipment and software used in experimental research resulting in publication should contact the Stem Cell Core Academic Coordinator.

Acknowledging the Core

Core users receiving services from the UCR Stem Cell Core are required to acknowledge the facility in publications and presentations. The following text could be used in publications: "This work was supported by the UCR Stem Cell Core Facility. The UCR Stem Cell Core is a CIRM funded shared facility."

Please inform the Academic Coordinator when you have been published or presented work done in the Core: ivka.afrikanova@usr.edu.

Grant Writing and Collaborative Projects

The core staff will submit grants to private and non-private organization for renovation of the facility and purchasing of new equipment to facilitate the work of UCR campus stem cell researcher. The Core staff will also submit grants for development of new stem cell products and technologies that will be of use in the stem cell community at large. The Core staff can also be consulted for advice on grants submitted by the PIs using the Core. There will be an hourly recharge for such consultations.

Working in the UCR Stem Cell Core Facility

Cell Culture Facility

The Core cell culture facility currently allows the propagation of human embryonic stem cells and induced pluripotent stem cells. In addition the Core allows culturing of human mesenchymal cells and multipotent stem cells.

Safety training requirements: UCR Stem Cell Core researchers are required to take laboratory safety training and bloodborne pathogens training and receive approval from their PI before they start working in the facility.

Safety training requirements: Non-UCR Stem Cell Core visitors, volunteers and service personnel can enter the facility only after approval by the Stem Cell Core staff (to be determined on a case by case basis).

Tissue Culture Rules:

1. Do not consume yeast-based beverages 24 hours prior to working in a Core culture room.
2. Do not bake for 3 days prior to working in a Core culture room.
3. Practice sterile and aseptic cell culture technique at all times. Follow Core **Standard Operating Procedures (SOPs)** at all times.
4. Wash your hands thoroughly using antibacterial soap before entering and leaving the laboratory.
5. Wear personal protective equipment:
 - Must wear lab coat, gloves and shoe covers.
 - Must wear a facemask when needed.
 - Must wear a face shield or protective goggles and cryogloves when working with liquid nitrogen tank.
6. Always put on shoe covers when entering the sterile area of the Tissue Culture Suites.
7. Never open or handle incubators with bare hands.
8. Clean up spills from the culture containers or shelves in incubators and on the racks in the hood right away with 70% ethanol.
9. Clean water baths (biweekly), incubators (monthly), and bench tops (daily) or as much as needed.
10. Bench tops and tabletops must be free of any trash (used gloves, serological pipettes, pipette tips, etc.).
11. Do not keep labware on the floor. Empty cardboard boxes are to be flattened and place outside in Batchelor Hall for custodian pick-up.
12. Do not talk or use cell phone while handling cells.
13. Do not talk or use cell phone with your gloves on.
14. Avoid walking closely behind a biosafety cabinet operator when work is being done.
15. Avoid talking, sneezing and coughing when you work. Use a surgical mask if you have an allergy or common cold.
16. Food consumption, drinking chewing gum, applying cosmetics or handling contact lenses are absolutely prohibited in the UCR Stem Cell Core laboratories as is the storage of food or beverages in refrigerators/freezers used for research materials.
17. Never pipette by mouth.
18. Minimize splashing and aerosol generation. When pipetting, expel liquids against the side-wall of a tube rather than against the tube bottom. If aerosols of infectious materials will be generated, work in a BSC (Biological Safety Cabinet).
19. Use secondary containers (trays, specimen transport bags) for the prolonged storage or transport of infectious materials.
20. Keep the laboratory door closed when working with BSL-2 material.
21. Do not block exits.
22. Work safely with sharps, and follow Core **Standard Operating Procedures (SOPs)**.

Tissue Culture suites

The Core cell culture facility currently has 3 tissue culture suites. The tissue culture suites are sterile areas. The culture suites foyer is a semi-sterile area. **Tissue Culture Room A** houses one Class II biosafety tissue culture cabinet and one laboratory fume hood. **Tissue Culture Room B** and **C** each house two Class II biosafety tissue culture cabinets. There is an inverted

microscope set up in each room. Fluorescence optics and a camera are set up for the microscope in TC Room A.

Tissue Culture Room A (TC Room A) is assigned for use by the Stem Cell Core staff only for work with pluripotent stem cells that have passed through quarantine checks.

- An AMAXA portable Nucleofection instrument is available for transfecting stem cells. The Core provides human stem cell nucleofection solution through Sales and Service. However, users should provide their own nucleofection solution for transfecting other cell types. Arrange with Maria Valle to use this device.

Tissue Culture Room B (TC Room B) is used to maintain human stem cells, as well as to culture and prepare cells for incubation in the BioStation CT. Both normal and low oxygen (5%) incubators and a 32°C incubator are available.

- BioStation CT users will need to go through training before scheduling a run in the BioStation.
- BioStation CT users should consult with the Academic Coordinator to determine when their experiment will fit into the schedule.
- For the BioStation CT, investigators may be allowed to run experiments with cells in addition to stem cells if all cells go through *Mycoplasma* testing before entering the Core and if approval is given by the Academic Coordinator before the experiment is set up. Such experiments would need to include stem cells and would be done only if comparisons to stem cells were needed.

Tissue Culture Room C (TC Room C) will be used for culturing mesenchymal, multipotent stem cells and human pluripotent stem cells.

Experiments involving retroviruses, lentiviruses and adenoviruses, transfection and transduction will be conducted in TC Room C.

This room is also assigned for the extraction and preparation of mouse embryonic tissues such as fibroblasts.

Tissue Culture Equipment Room

The Core houses a -80°C freezer, a liquid nitrogen tank, and autoclave.

- Freezer -80°C: Each Principal Investigator will be assigned a specific shelf area in the -80°C freezer. Individuals must use their assigned space and comply with instructions for freezer use given by the Stem Cell Core staff.
- Cryopreservation: Researchers will be allocated a space in the cryogenic liquid nitrogen tank. The liquid nitrogen tank is locked at all time. **Core users MUST contact Core staff in advance when they need to use the liquid nitrogen tank.** Freezing and

retrieving frozen cells and documenting in the cell freezing log will be done by the Academic Coordinator or Lab Assistant.

- The Countess cell counter is available on a fee-per use basis.

Regulatory Review Requirements for Human Stem Cells

The maintenance and use of **human pluripotent stem cells** (embryonic, induced or lines intended to be induced) requires review by the following regulatory committees (as mandated by federal and state agencies):

Committee		Covered activities	Why?	Protocol	Application
Stem Cell Research Oversight Committee	SCRO	All handling/ use of human pluripotent cells	Ensures state mandated review of ethical concerns related to human stem cells	Stem Cell Use Authorization (SCUA)	Contact patricia.steen@ucr.edu
Institutional Biosafety Committee	IBC	All handling/ use of human derived materials	Ensures appropriate safety procedures for handling human cells	Biological Use Authorization (BUA)	http://or.ucr.edu/OrPortal/index.aspx (UCR faculty only) contact patricia.steen@ucr.edu
Human Research Review Board	HRRB	All research involving humans or materials derived from humans	Ensures that the rights of the original donors of human materials are maintained	UCR HRRB protocol	HRRB review of human pluripotent cell line use is accomplished through the SCUA (the HRRB reviews relevant SCUA sections), contact monica.wicker@ucr.edu
Institutional Animal Care and Use Committee	IACUC	Only research involving the use of live non-human vertebrate animals	Ensures appropriate animal care. Needed only if mouse embryonic fibroblasts (MEF) are to be harvested or if experiments will involve vertebrate animals	Animal Use Protocol (AUP)	http://or.ucr.edu/Home/Forms.aspx?T=2 or contact IACUC@ucr.edu

It will take 1-2 months to complete the above reviews, it is recommended that researchers who have not obtained the above approvals complete the necessary paperwork and begin the approval process prior to the time they anticipate beginning a stem cell project. The Academic Coordinator can provide advice on meeting these regulations.

Principal Investigators with existing BUAs (Biological Use Authorization) must amend their BUA to include the Core Facility as a location.

Material Transfer Agreement (MTA)

- Working with human pluripotent stem cells requires **Material Transfer Agreement (MTA)** for each line. Principal Investigators are required to obtain their own MTAs, signed by authorized representatives, prior to using materials in the Core. The Office of Technology Commercialization reviews and approves Material Transfer Agreements (MTA). Please contact UCR's Material Transfer Officer at MTA@ucr.edu to facilitate this process. (See <http://www.ora.ucr.edu/IP/MTA.aspx> for further information and guidance.)
- Receipt, use, and storage of human pluripotent stem cells must comply with the MTA of the provider. Please be aware that different providers have different MTA requirements. All Principal Investigators are able to maintain hESCs and hiPSCs at the Stem Cell Core, subject to the following MTA requirements:
 - a) Principal Investigators are required to obtain their own MTA to grow hESCs and hiPSCs.
 - b) The MTA should indicate that these cells will be used in their lab and in the Core. Principal Investigators will then be able to bring cells into the Core, and obtain cells from the core for a small service fee used for cell storage, maintenance and characterization.

Please always inform the UCR Stem Cell Core Academic Coordinator when you update your SCUA, BUA, HRRB or obtain a new MTA.

Outside cell lines

- Any live cell cultures that are brought into the Core will require screening for *Mycoplasma* and must be verified to be clear of *Mycoplasma*, *Acholeplasma*, *Ureaplasma*, and other cell culture contamination (bacteria, fungi).
- The Core will provide screening for *Mycoplasma* using a luminescence-based detection method. Investigators will be recharged for the reagents needed for *Mycoplasma* screening. Once hourly charges for Core personnel time are established, investigators will also be recharged for staff time for performing this test.
- *Once a line is established to be free from contamination, it can be expanded, used and frozen down in the Core.* Should samples of the line be returned to the Principal Investigator's laboratory, they would need to be rescreened before being brought back into the Core.

- Principal Investigators may choose to use cells provided by the Core, which have already gone through this screening process.

Live Cell Imaging and Standard Imaging Facility

- In the culture suite, the Core maintains three microscopes, which can be used with stem cell research. One inverted microscope with fluorescence is in TC Room A.
- The Core maintains a BioStation CT, an incubator supplied with a robot, microscope and a camera that allows extended time-lapse video recordings of stem cell behavior and development. The BioStation CT is linked to a remote workstation for data analysis. Anyone who plans to use the BioStation CT is required to be trained by the Core staff. Use of the BioStation CT is scheduled on the Stem Cell Core website under Scheduling. The Core provides back up of data on USB terabyte device, but it does not store data for longer than 3 months. The BioStation data files will be deleted every month. All users should secure their data storage. Access to the BioStation CT is currently not charged, but charges may be implemented in the future.
- The Core has a microscopy room with a fluorescence stereoscope (SMZ 800) and a Nikon Eclipse Ti inverted microscope with a deconvolution module that allows near confocal quality image acquisition. **Live stem cell cultures and fixed slides of stem cells can be imaged with this instrument.** In room 1151 of the Core there is a Nikon Eclipse Ti workstation for data analysis. The Nikon Eclipse Ti standard operating procedure is posted in the imaging facility room and MUST be read and followed at all times. Access to microscopes is currently not charged but charges may be implemented in the future.
- A Cytovision karyotyping workstation for chromosome analysis (G banding and FISH). Karyotyping is a service that the Core will provide in 2014. Individuals working with stem cells may use this equipment for their own projects. Currently there is no charge for use of this instrument, but fees may be introduced in the future.

Molecular Biology Facility

General

- The Molecular Biology Facility is a semi-sterile facility.
- The Stem Cell Core Facility houses an Analysis Room outfitted with molecular biology instruments. All procedures will be performed in accordance with good quality assurance and record keeping practices pursuant to good laboratory practices.
- Currently the Stem Cell Core Facility does not allow propagation of any bacterial related cultures and any plasmid preps due to sterile requirements of our tissue culture facility. All bacterial preps and plasmid purifications will be performed in the annex molecular biology area in room 1151.

Cell and Molecular Analytical Equipment

- Cells grown in the Core can be analyzed by users in the Core. Alternatively, users can set up experiments in their own lab and bring their samples (labeled cells, RNA or DNA) to the Core for analysis.
- Currently, the Core maintains the following instruments. These instruments can be used after completing training and a check out under the supervision of the Core staff. Access to the equipment is currently not charged but charges may be implemented in the future.
 - **BioRad CFX384, Real time Quantitative-PCR (qPCR)** instrument for quantitative gene expression analysis.
 - **BioRad Termal Cycler** for gene cloning, PCR, cDNA and library preparation.
 - **Lonza Lucetta Luminometer** is a single sample luminometer for detection of bioluminescence and chemiluminescence. It is equipped with a tailor-made measurement mode for Mycoplasma Detection Assay for simple user interface. It can also be used for many other luminescence based analysis methods, such as cell proliferation and cytotoxicity assays or luciferase reporter gene assays.
 - **Invitrogen Qubit 2.0 fluorometer** for highly specific and sensitive DNA, RNA and protein fluorescence-based quantitation assays.
 - **Luminex 200 System** (Life technologies) for multiplexing biological samples in cell signaling pathway studies, immunological studies, and clinical diagnostics is currently housed in the Room 1151. The Luminex 200 system can perform up to 100 assays simultaneously in a single well of a microtiter plate. It can be used for work involving stem cells or other cells. **There is currently a recharge for using this instrument.** Each user should prepare samples in their own lab prior to running their assays.
 - **Biotek Epoch Microplate Spectrophotometer** with 200 nm to 999 nm wavelength range and 6- to 384- microplate reading capability, controlled with the Gen5 Data Analysis software interface.
 - **Cell Lab Quanta SC flow cytometer** (Beckman Coulter) for three-color fluorescence and cell cycle analysis.
 - **autoMACS Pro Separator** (Miltenyi Biotec) is a computer controlled device for automated separation of magnetically labeled cells using MACS technology with multiple samples.

Waste Disposal

Biohazard waste

- **Remove all liquid from culture vessels before discarding biohazardous waste.**

- Discard all papers or wrappers of serological pipettes into the regular trash bin.
- Discard biohazardous waste (any vessel or pipette that has come in contact with human cultures) into the red bags placed in the red bin (rigid container with a lid and biohazard symbol).
- Dispose all sharp items (scalpels and needles) in the designated sharps containers.
- Aspirate liquid waste with aspirating pipettes to a vacuum aspirator bottle that is prefilled with bleach solution. This makes sure that everything that goes into the liquid waste container is disinfected.
- Empty the liquid waste when it reaches the line designated "full". Fill the waste collector bottle with bleach solution up to the designated line for "bleach". Always rinse the bottle with tap water after the liquid waste has been discarded.
- Waste from Cell Lab Quanta Flow Cytometer and Luminex 200 is designated as hazardous and must not be poured in the drain. When the waste bottle reaches the line designated "Full", contact the UCR Stem Cell Core Staff to assure for proper disposal.

Chemical waste

- Chemical waste must be disposed of in the designated labeled bottles.
- Contact the UCR Stem Cell Core staff if you have to dispose of chemical waste.
- Work with paraformaldehyde (PFA) solution under the chemical hood. PFA powder is not allowed in the Stem Cell Core.
- Contact the UCR Stem Cell Core staff for proper disposal of bottles that have contained harmful chemicals like acids, bases, flammable and corrosive.

Sharps

Sharp objects include needles, glass pipettes, scalpels, tweezers and scissors.

- Take extra care when handling sharp objects.
- Do not re-sheath needles or any other sharp object.
- Dispose of waste sharps in the sharps bin provided.
- Ensure the lid of the sharps bin is closed when not in use.
- Do not remove needles from the syringe prior to disposal.

- In case of a sharp object injury, wash your hands thoroughly several times with antibacterial soap, then inform immediately your supervisor and UCR Stem Cell Core staff. Seek medical advice and follow a recommended medical treatment.
- Use a broom and a dustpan to collect broken glass. Dispose in sharps container.
- Never dispose broken glass it in the regular trash.

Accident Response Procedures

Spill response procedure

- Designate the area and isolate it.
- Decontaminate with 10-20% bleach or 70% ethanol if the surface does not permit the use of bleach.
- Cover the area with wipes soaked with 10% bleach or 70% ethanol.
- Allow 20 minutes for the bleach or ethanol to act.
- Wipe and collect all material by a tongue-forceps in biohazard bag.
- All contaminate sharps must be disposed in sharps container.
- For chemical spill designate the area and call [Environmental Health & Safety](#) (951) 827-552

Cleaning and Disinfection		
Disinfectant	Use	Treatment
10-20% bleach solution	Treat tissue culture liquid waste, viruses, clean spills, biosafety cabinets (BSC) interior	30 minutes
70% ethanol	Bench top surfaces, BSC work surfaces, incubators	Wipe to 30 minutes if cleaning a spill
Anti-bacterial soap detergent	Hands wash, water bath interior wash, incubators surfaces and trays wash, glassware wash	1 minute for regular hand wash, 15 minutes wash in case of injury
Waxie floor disinfectant	Floors wash and disinfection every week	Wipe and let the surface air dry
Bleach disinfectant wipes	Wipe bench top surfaces and handles of refrigerators	Wipe and let the surface air dry

Emergency Response

Medical

- Wash affected area with anti-bacterial soap for 15 minutes.
- If eyes are affected use only eyewash water for 15-20 min and seek medical attention.
- Inform your supervisor and/or Stem Cell Core staff.
- Ask for medical attention. In case of a serious injury call 9-911 immediately.
- Follow post exposure procedures

Fire

In the event of a fire or fire alarm, get out of the area quickly from the two exits at the lobby and on the back. Do not stop to pick up personal belongings. Gather at the Core patio at a safe distance from the buildings.

Earthquake

In the event of a major earthquake, take cover under something solid like a table until the shaking stops then exit the building via the two exits at the lobby and on the back and gather at the Core patio at a safe distance from the buildings.

