Sort Sample Request Form

The University of Massachusetts Flow Cytometry Core offers sorting for BSL2, BSL2-enhanced (2+) and BSL3 categorized cells of human or animal origin. The safety of the staff and users of the facility is the ultimate concern when sorting unfixed samples containing unscreened human or nonhuman primate cells, known infectious agents (≥ risk group 2), or recombinant or synthetic nucleic acid molecules or vectors. Therefore, information about the sample source and potentially bio hazardous agents is critical for effective biosafety risk assessment.

Appropriate biosafety approval by the IBC and the core facility is required prior to the use of the machines. This includes filing a ***FACS Addendum*** to your IBC Docket, which will be kept on file at the FACS Core.

Please provide this* Sort Sample Request Form *to the FACS Core upon scheduling a sort or immediately thereafter, and no later than TWO DAYS PRIOR to your sort date. This form (page 2) must be filled out completely and signed by the principal investigator for EACH sort requested, *even for self-sorting*.

Without the proper risk assessment enabled by this questionnaire and supporting information, the samples will ***NOT*** be sorted. Refer to our web site: *http://www.umassmed.edu/facslab/* for available machines.

Assignment of biosafety levels is the sole responsibility of the IBC, and is not to be determined by the FACS Core staff or director. The safety of the staff and users of the facility is the ultimate concern, so the FACS Core has the option to confer with the IBC prior to scheduling any sort.

The International Society for Advancement of Cytometry revised its Cell Sorter Biosafety Standards in 2014. *J. of the International Society for the Advancement of Cytometry*, Cell Sorter Biosafety Standards, 2014.
This table provides a concise summary of recommended biocontainment levels for cell sorting.

Cell Type	Fixed or Unfixed	Source, Experimental Condition or Modification	Bio-containment for Flow Sorting
Any	Fixed	Any source or experimental condition With adequate paraformaldehyde or formalin fixation	BSL2
Mouse (or other non-primate)	Unfixed	Transduced with replication-deficient lentivirus or retrovirus vector (and vector stock tested negative for replication competent virus)	BSL2
Mouse (or other non-primate)	Unfixed	Transduced with replication-competent lentivirus or retrovirus vector or Transduced with replication-deficient lentivirus or retrovirus vector (and vector stock NOT tested for replication competent virus)	BSL2 + hood
Human or non-human primate	Unfixed	Human cell lines (regardless of source, or testing for pathogens).	BSL2 + hood
Human or non-human primate	Unfixed	Includes all primary cells (regardless of source, or testing for pathogens). Includes cells from humanized mice.	BSL2-enhanced
Any	Unfixed	Infected with risk-group 2 agents requiring BSL-2 containment. Examples: LCMV, Vaccinia, Listeria, Malaria, KSHV, Aspergillus, Cryptococcus, etc.	BSL2-enhanced
Any	Unfixed	Infected with agents requiring BSL-3 containment. Example: Mycobacterium tuberculosis	BSL-3

Sort Sample Request Form

Your Name:	
Laboratory (PI):	
Date of Sort:	
IBC Docket Number:	

IBC approved sorting biosafety level (circle one):	BSL2	BSL2-enhanced	BSL3

1. What is the appropriate biosafety level for the samples to be submitted for sorting (check one)?
(for routine *in vitro* procedures, not the sorting procedure)

☐ **BSL-1** ☐ **BSL-2** ☐ **BSL-2+** ☐ **BSL-3**

2. Will the samples be fixed, with all potentially infectious agents inactivated?

☐**Yes** ☐**No** If **yes**, describe the fixation method:

3. Will the samples be of human origin (or other primate)?

☐**Yes** ☐**No** If not of human origin, please identify the cells to be sorted:

4. Will the samples contain known infectious agents?

☐**Yes** ☐**No** If **yes**, list the infectious agent(s):

5. Will the samples contain recombinant or synthetic nucleic acids (r/s NA)?

☐**Yes** ☐**No** If **yes**, list the vector by name and describe the method of delivery of the r/s NA molecules (e.g. transfection with expression plasmid, lentivirus transduction):

6. If a viral vector will be used for transduction of cells, was the original viral vector able to infect human cells?

☐**Yes** ☐**No** ☐ **N/A**

7. If a viral vector will be used for transduction of cells, was the vector stock tested and shown to be free of replication-competent virus?

☐**Yes** ☐**No** ☐ **N/A**

8. Will exogenous genes be transferred into the cells?

☐**Yes** ☐**No** ☐ **N/A** If **yes**, list the genes:

9. Are any of these genes oncogenes or toxins?

☐**Yes** ☐**No** ☐ **N/A** If **yes**, list the genes:

Principal Investigator Signature: _____

Date: _____

If you have any questions please feel free to contact us at 6-3276 or Carol Schrader at 6-6008.