MINUTES OF THE INSTITUTIONAL BIOSAFETY COMMITTEE MEETING
September 18, 2013
3:00 PM, 410 Plant Biotechnology Building

MEMBERS PRESENT:	Chunlei Su, Chair; David Bemis, Tamara Chavez-Lindell, Doris D'Souza, Al Iannacone, Melissa Kennedy, Reggie Millwood, Bonnie Ownley, Jae Park
	Ex-Officio –Brian Ranger, Jonathan Phipps
MEMBERS ABSENT:	Seung Baek, Patti Coan, Paul Dalhaimer, Dan Kestler, Jun Lin, Ling Zhao
OTHERS PRESENT:	Dr. Louisa Rispoli, Jessica Woofter

Opening:

The meeting was called to order by the Chair, Chunlei Su at 3:03 PM.

Minutes of August 21, 2013 were reviewed and approved pending correction of one typographical error. There was 1 abstention.

IBC Applications:

#330-13 (Eric Boder) Recombinant DNA and Human Derived Materials Registration, III-D-2/III-E-1, 3-year rewrite
Dr. Boder's research proposes to apply directed evolution of mammalian cell lines by engineering novel cell adhesion proteins, protein-ligating enzymes, antigen presenting proteins, and membrane fusion proteins using standard molecular techniques. Ultimately these studies are intended to elucidate the functional properties of these types/classes of proteins in order to identify new phenotypes of interest for applications in drug delivery, biosensing, and vaccine design. Proteins of interest will be expressed and purified for studies of biochemical properties and function. Recombinant proteins will be displayed on the surface of yeast (*Saccharomyces cerevisiae* or *Pichia pastoris*) to screen for mutant proteins with special binding properties. Since some of the genes/proteins in this study are derived from Risk Group 2 agents, the review category was deemed to be III-D-2-a. The containment level was set at BSL-2 since human cell lines and retroviral vectors (replication incompetent ectopic MMLV-based vectors) will be used during the study. The registration was approved contingent upon editing of the non-technical summary to include the source of the membrane proteins.

#351-13 (J. Lannett Edwards) Recombinant DNA Registration, III-E, 3-year rewrite
Dr. Lisa Rispoli was present and answered questions regarding Dr. Edwards' research covering the *in vitro* expression of two genes (one encoding a putative transcription factor and the other a hypothetical protein) that seem to be important in successful bovine reproduction. Briefly, cDNAs of these genes will be cloned into a traditional commercially available expression vector (IPTG-inducible T7 promoter) and transformed into *E. coli* BL-21-derived cells for protein production. The overall goal is to send purified proteins to a commercial company for antibody production. The containment level was established at BSL-1. The committee voted to approve the registration as written.

#354-13 (Paul Dalhaimer) Recombinant DNA, III-E, 3-year rewrite
Dr. Dalhaimer's research covers the molecular mechanisms of lipid droplet (LD) formation. LDs are especially prevalent in mammals that are obese or diabetic. Genes encoding neutral lipid synthesis enzymes as well as genes involved in the formation of endoplasmic reticulum are being studied using *Schizosaccharomyces pombe* as a host. Established molecular biology techniques, including cloning, transformation, and homologous recombination will be used to generate recombinant *S. pombe*. The containment level was established at BSL-1. The committee voted to approve the registration contingent upon editing of the genus of yeast used in the registration.

#409 (Francisco Barrera) Recombinant DNA and Human Derived Materials Registration, III-D-2-a, New Registration
Dr. Barrera's research covers the application of biophysical techniques to biological systems of biomedical relevance. Specifically, the research aims for a better understanding of maturation and self-assembly of the HIV capsid protein. The gene for the HIV capsid protein (obtained from the NIH AIDS Reagent Program) will be cloned into an IPTG-inducible pET vector and expressed in routine *E. coli* strains (DH5α or BL21). Protein will be purified using standard biochemical techniques and applied to synthetic lipid systems to study the self-assembly processes. Dr. Barrera also registered the use of human cells (HeLa cervical adenocarcinoma) to be used for studying the membrane insertion mechanisms of synthetic peptides designed to target tumor cells. The containment level was established at BSL-1 for the recombinant DNA procedures. The culture and manipulation of human cells will be conducted at BSL-2. The committee voted to approve the registration pending certification of the biosafety cabinet for human cell line use and minor editing of the non-technical and technical summaries.

#411 (Nitin Jain) Recombinant DNA, III-E, New Registration
Dr. Jain's research will involve cloning of human p450 genes, cyp2c9 and cyp3a4 into a pcWORI vector. The genes have been synthesized artificially using a commercial service. The recombinant DNA will then be used to express protein in a BL-21, XL-1 blue or DH5alpha *E. coli* expression system. The expressed proteins will be purified using standard chromatographic approaches and then used further for structure-function studies using NMR spectroscopy. The containment level was established at BSL-1. The committee approved the registration as written.

Old Business:

Administrative Report
Brian Ranger provided the committee with the administrative report. Following up on the August 21, 2013 IBC meeting, Dr. Feng Chen's registration (#238-13) was administratively corrected to include autoclave validation dates and correction of typographical errors. Dr. Paul Frymier's registration (#350-13) was corrected administratively to include a significance statement in the non-technical summary and training information for the principal investigator. Dr. Elizabeth Fozo's registration (#352-13) was corrected administratively to include the correct bleach contact times, training dates, and correction of typographical errors. There were three Human Derived Materials Registrations that were approved administratively: Dr. Shanfeng Wang (#407); Dr. Jiangang Chen (#408); and Dr. Dallas Donohoe (#410). Dr. Elizabeth Fozo's infection agent registration (#353) has been terminated as its contents were condensed and included in her new registration (#352-13).

AVCRE Search Update
Brian Ranger notified the committee that four external applicants have been chosen for interviews. All are extremely qualified and have had compliance experience. A decision should be reached within the next couple of weeks.

New Business:

2013 Bloodborne Pathogen Exposure Control Plan

Brian Ranger notified the committee that the 2013 Bloodborne Pathogen Exposure Control Plan has been reviewed for yearly updates and will be reissued by the end of the month with no significant changes.

Plans for a BSL-3 Suite in New Research Facility

Brian Ranger notified the committee that the Microbiology department is considering construction of a Biosafety Level-3 containment suite within the new Class/Lab Bldg. (the facility replacing Walters Life Sciences). The new site may also include a satellite vivarium. The facility will be built to enhanced containment specifications, but would likely operate at BSL-2 pending the need for BSL-3 (i.e. funded projects and/or new faculty demands) at which time it will be easily converted to higher containment. Brian indicated an outside contractor would have to be hired to certify and inspect the new facility once it was built.

The next meeting has been tentatively scheduled for October 16, 2013.

The meeting was adjourned at 3:47 PM.