**MINUTES OF THE INSTITUTIONAL BIOSAFETY COMMITTEE MEETING**
**January 18, 2012**
**3 PM, 410 Plant Biotechnology Building**

MEMBERS PRESENT: John Sanseverino, Chair; Chunlei Su, Vice-Chair; Patti Coan, Dave Bemis, Tamara Chavez-Lindell, Doris D'Souza, Dan Kestler, Mariano Labrador, Jun Lin, Reggie Millwood, Bonnie Ownley, HCR Wang, Ling Zhao

Ex-Officio – Brian Ranger, Sarah DiFurio, Mark Smith

MEMBERS ABSENT: Paul Dalhaimer, Al Iannacone

OTHERS PRESENT: Dr. Tessa Burch-Smith, Dr. Kellie Burris, Dr. Heather Williamson-Jordan, Melissa Henn, Nancy Horn, Jessica Woofter

**Opening:**

The meeting was called to order by Chair, John Sanseverino at 3:01 PM.

Minutes of December 7, 2011 were reviewed and approved as written.

**IBC Applications:**

**#271-12 (Pam Small) Infectious Agent Registration, 3-year rewrite**
Dr. Heather Williamson summarized Dr. Pam Small's studies regarding *Mycobacterium ulcerans* (causative agent of Buruli ulcer), including further investigation into the environmental niche(s)/reservoir(s) of the microbe, molecular epidemiology/ecology, and mechanisms of disease acquisition. She discussed the addition of *S. aureus* for work in an animal model of transmission where abraded skin of the animal model will be topically infected to provide a positive control for the study. The study will be conducted at (A)BSL-2. The committee discussed that Dr. Williamson and Dr. Amy Knowles/Occupational Health should be listed as additional contacts in case of accidental spills/exposures. The committee voted to approve the registration pending modifications to the registration.

**#261-12 (Cynthia Peterson) Recombinant DNA Registration, III-E, 3-year rewrite**
Nancy Horn provided the committee a summary of Dr. Peterson's registration covering the generation of recombinant forms of several human proteins involved in cell attachment (e.g. integrins, vitronectin). Briefly, genes encoding these proteins will be mutated and subsequently transfected/expressed in various cell lines (mammalian and insect) so that protein structure and function can be characterized. The committee previously tabled this registration pending clarification of the Rous sarcoma-based promoter of the pRc/RSV vector. Brian Ranger clarified that this is a single LTR in the promoter and is only a sub region of the full promoter. The committee approved the registration as written.

**#373 (Neal Stewart) Recombinant DNA Registration, III-E-2-a, new registration**
Dr. Kellie Burris provided the committee with a brief summary of Dr. Stewart's registration covering insect resistance/sensitivity to Cry toxins and other novel putative insecticidal genes expressed in transgenic plants (e.g. chickpea). The use of novel insect resistance genes and the development of

these products for agricultural use will provide for an improved, environmentally friendly means of agricultural pest management. The committee voted to approve the registration as written. There was one abstention. BL-1/P will be used for transgenic plant work.

**#374 (Neal Stewart) Recombinant DNA Registration, III-E-2, new registration**
Dr. Kellie Burris provided the committee with a brief summary of Dr. Stewart's registration covering genetically modifying plants (e.g. tobacco as a model) to express a novel antimicrobial, endolysin, discovered from a bacterial virus (bacteriophage). This may provide a biological mechanism for the control of endophytic bacterial pathogens and foodborne pathogens colonizing produce (such as lettuce). The committee expressed concern about the BSL-2 organisms listed in the registration, and added that Dr. Davidson should be added to the registration. Dr. Burris and Reggie Millwood clarified that the protein extracts and plant parts are taken for testing, and all work with Risk Group 2 pathogens will be carried out in Dr. P. M. Davidson's BSL2 laboratory (covered by his Infectious Agent IBC registration, #300-10). These organisms will only be used to assay the antimicrobial activities of endolysin and will not be used for recombinant DNA studies. The committee approved as written. There was one abstention. BL-1/P will be used for transgenic plant work; test pathogens will be handled at BSL-2 as indicated.

**#375 (Tessa Burch-Smith) Recombinant DNA Registration, III-E-2-a, new registration**
Dr. Tessa Burch-Smith provided the committee with a brief overview of her studies regarding plasmodesmata in plant cells. The study involves *Agrobacterium*-mediated transformation of plant cells with chloroplast genes involved in plasmodesmata formation/function. The committee approved the registration as written. BL-1/P will be used for Dr. Burch-Smith's procedures.

**#266-12 (Jun Lin) Infectious Agent Registration, 3-year rewrite**
**#265-12 (Jun Lin) Recombinant DNA Registration, III-D-1-A/4, 3-year rewrite**
Dr. Lin provided the committee a summary of his research and answered committee questions. His research is focused on determining the molecular mechanisms of colonization and antibiotic resistance in *Campylobacter* species (*C. jejuni, C. coli*). Specifically, transposon mutagenesis/complementation studies as well as transcriptional studies will be used to elucidate which genes/gene promoters are essential for campylobacter colonization and persistence. Additionally, wild-type and recombinant strains will be studied *in vivo* in chickens. Recombinant plasmids will be either introduced to *Salmonella* vaccine strains for oral administration or introduced directly as DNA vaccines via intranasal route. Dr. Lin's studies will be conducted at (A)BSL-2. The committee posed questions/concerns regarding Dr. Lin's job title, spill procedures, and consistency in indicating bleach solutions. Both registrations received committee approval contingent upon addition/correction of the items listed above. There was one abstention.

**#260-12 (Ted Henry) Recombinant DNA Registration, III-D-4-a, 3-year rewrite**
Dr. Henry's registration covered the development of a transgenic zebrafish that can serve as a bioreporter of estrogenic substances in the environment. Briefly, bioreporter constructs will consist of an estrogenic-responsive promoter derived from zebrafish linked to various fluorescent proteins. The committee voted to approve the registration as written. There was one abstention. The study will be conducted at BL-1

**#270-12 (R.N. Trigiano) Recombinant DNA Registration, III-E-2-a, 3-year rewrite**
Dr. Trigiano's registration involved the creation of small insert libraries of various woody and herbaceous plants, as well as *Agrobacterium*-mediated transformation of chrysanthemum plants with selectable markers (e.g. kanamycin resistance) and/or reporter genes (e.g. GFP). Transformed plant cells are then regenerated for downstream studies. All transgenic plants will be maintained in the lab

and destroyed prior to disposal. The committee posed questions/concerns regarding the "other plant species" listed under hosts. The committee tabled this registration pending the clarification of the plant species.

**#267-12 (Karen Vail) Venomous Animals (Brown Recluse), 3-year rewrite**
Dr. Vail's registration covered the containment procedures for brown recluse (*Loxosceles recluse*) spiders being bred to generate a colony for residual insecticide efficacy studies. The registration specified the use of arthropod containment level 1 (ACL-1) procedures as outlined in ACME/ASTMH Arthropod Containment Guidelines. The committee approved the registration as written. Brian Ranger also presented Dr. Vail's proposal to conduct a similar study on bed bugs and queried the committee on whether she should submit a registration to cover that study. The committee decided that the bed bug study did not fall under IBC purview and stated that oversight would be at the discretion of Dr. Vail and the Biosafety Office.

**Old Business:**

Administrative Report

Brian Ranger provided the committee with the administrative report. Following up on the December, 2011 IBC meeting, the review category or Dr. Steve Wilhelm's registration (#255-11) was administratively changed from III-F to III-E. Six registrations were administratively terminated (PIs no longer at UT).

Department Head Responsibilities

Brian Ranger notified department heads of changes to the Section IV-E of the IBC Charter (Department Head Responsibilities). Feedback has been generally positive, with only a few minor clarifications requested. The updated charter has been posted to the website.

Dr. Amy LeBlanc VSV Study-USDA Inspection Results

Brian Ranger updated the committee on the USDA inspection for Dr. LeBlanc's VSV study, conducted on January 4$^{th}$ – 5$^{th}$. The USDA had positive comments and approved the facility and standard operating procedures.

**New Business:**

NIH Guidelines update (October, 2011)

Brian Ranger provided the committee with updates to the NIH Guidelines, Appendix B. Changes included additional strain information/clarification for a few of the agents listed in Appendix B. The updates do not affect the IBC since these agents are not currently in use at UT.

Update on Autoclaved Biowaste Disposal Process

Brian Ranger provided the committee with an update on the autoclave boiwaste disposal process. The Biosafety Office and Facilities Services (Building Services) have placed color-coded, labeled containers in designated areas. The new process should be launched by February 1$^{st}$ pending training of janitorial staff.

2011-12 IBC/Biosafety Survey

Brian Ranger provided the committee with an update on the survey sent in mid-November 2011. The survey has been extended to the end of January, 2012 due to low response. An update on the results will be provided at the next IBC meeting.

New Form(s) / Data management system

Brian Ranger explained that a few of the early comments from the IBC/Biosafety survey favored consolidating and condensing the existing IBC registration forms. As a result, the Biosafety Office will revive its efforts to improve the IBC form/registration process. He also indicated that Dr. Reed had asked those compliance areas without an existing TERA module to explore data management systems available for purchase from outside vendors as UT OIT would not pursue further development of TERA compliance modules. The Biosafety Office is currently reviewing the capability and pricing of several systems.

The committee is scheduled to reconvene February 15, 2012.

The meeting was adjourned at 4:03 PM.