

MINUTES OF THE INSTITUTIONAL BIOSAFETY COMMITTEE MEETING

February 7, 2014

3:00 PM, 223 Plant Biotechnology Building

MEMBERS PRESENT: Chunlei Su, Chair; Jun Lin, Vice Chair; David Bemis, Tamara Chavez-Lindell, Paul Dalhaimer, Doris D'Souza, Melissa Kennedy, Dan Kestler, Bonnie Ownley, Ling Zhao

Ex-Officio –Brian Ranger, Jonathan Phipps, Robert Nobles

MEMBERS ABSENT: Seung Baek, Patti Coan, Al Iannacone, Reggie Millwood, Jae Park

OTHERS PRESENT: Sean Pendleton, Jessica Woofter

Opening:

The meeting was called to order by the Chair, Chunlei Su at 3:04 PM.

Minutes of November 20, 2013 were reviewed and approved pending correction of minor typographical errors.

IBC Applications:

#229-14 (Seung Baek) Recombinant DNA and Human Derived Materials Registration, III-E, 3-year rewrite

Dr. Baek's research focuses on cancer chemoprevention affected by several cancer chemopreventive compounds including flavonoids, nonsteroidal anti-inflammatory drugs, and PPARgamma ligands. These compounds affect many genes involved in cell cycle regulation, signaling pathways, transcriptional regulation, and apoptosis. In this study, several recombinant DNAs and siRNAs representative of transcriptional factors, cytokines, cell cycle proteins, splicing factors, and cell signaling proteins will be transfected into mammalian cells to determine whether those compounds affect any specific protein pathways that are involved in tumorigenesis, inflammation, and obesity. The containment level was established at BSL-2 for use of human cell lines. The committee moved to approve the registration pending that labeling of insert genes according to class/function and correction of minor typos.

#361-14 (Irene Hanning-Jarquín) Infectious Agent Registration, 3-year rewrite

Sean Pendleton was present to provide the committee with a brief narrative of Dr. Hanning's research. The first objective is to evaluate the efficacy of probiotics (beneficial bacteria), botanicals (plant extracts) and prebiotics (indigestible grains used to promote the intestinal growth of beneficial bacteria) in minimizing or preventing *Salmonella spp.* and *Campylobacter spp.* colonization of poultry. This will be done using common antimicrobial evaluation techniques including disc diffusion assays. To determine the mechanisms of action of these antimicrobials, tools including real-time PCR, RT-PCR, PFGE, DNA sequencing, and DNA microarrays will be used. Potential candidate antimicrobials will be studied for mechanisms of action and also evaluated in vivo with an approved IACUC protocol. The second objective focuses on the potential spread of foodborne pathogens (e.g. *Salmonella spp.* and *Campylobacter spp.*) from poultry/livestock to fresh produce on diversified farms which promote rearing livestock and growing fresh produce within the same agricultural system. Briefly, multiple environmental samples will be collected from local farms and cultured to collect any pathogens from the samples. Information collected from the studies will be used to help identify the key sources, track movement of pathogens, narrow the 'how-to' information gap, and help the produce industry to develop strategies and control measures to improve food safety. Standard culturing procedures will be

utilized to isolate bacteria of interest. The committee tabled the registration pending clarification of future animal use (applicable IACUC protocols); the addition of *Escherichia coli* to the list of infectious agents (of interest); delineation and origins of strains; addition of Dr. Hanning-Jarquin to the personnel list; and the appointment of an appropriate secondary contact to oversee Dr. Hanning's research in her absence.

Old Business:

Administrative Report

Brian Ranger provided the committee with the administrative report. Following up on the November 20, 2013 IBC meeting, Dr. Mei-Zhen Cui's registration (#256-13) was administratively corrected to include a schematic diagram of adenoviral vector system and the correction of minor typographical errors. Dr. Cui also confirmed that all gene and vector combinations were accurate as listed in the registration. Dr. Jennifer Schweitzer's registration (#413) was administratively corrected to state that all plants are to be contained in a growth chamber in Hesler 206 and not in the greenhouse as the committee required. There were seven administrative terminations: Dr. John Biggerstaff (#289-12); Dr. Mei-Zhen Cui (#321-10); Dr. Graham Hickling (#324-11); Dr. Mingjun Zhang (#337-12); Dr. Jason Collier (#345-12 & #365); and Dr. Michael Karlstad (#357). All materials involved in these registrations have either been transferred or destroyed.

Completion of BSL-1/BSL-2 Lab Inspection – Fall 2013

John Phipps notified the committee that lab inspections have been completed for Fall 2013. Jon will be sending the committee a report with all the findings listing major issues. There were a few lab security and food in lab issues. Eyewashes were the biggest problem (not flushed regularly/documented; not working properly). This issue has been emphasized in the most recent biosafety trainings.

Charter Revision Status

Brian Ranger notified the committee that he will work with an IBC representative and Dr. Robert Nobles to complete a self-assessment/gap analysis of the IBC and its Charter. Current policies and procedures relative to NIH OBA expectations will be gauged. A revised Charter will be launched with new IBC appointments in July.

New Business:

2014 Annual Report

Brian Ranger briefly covered the data and annual accomplishments presented in the 2013 Biosafety Program annual report. Comments and corrections were solicited from the committee (no major revisions requested).

Robert Nobles, Assistant Vice Chancellor of Research & Engagement – Introduction and Discussion

Dr. Robert Nobles introduced himself to the committee prior to the meeting. The Office of Research and Engagement has hired Dr. Nobles to oversee research compliance, responsible conduct of research and research integrity programs. The newly created position will focus on ensuring that research projects at the university are in full compliance with federal regulations and ethical requirements. Prior to coming to UTK, Dr. Nobles served in a similar capacity at Texas A&M University where he served as Executive Director of Research Compliance and Biosafety. He has a doctorate in public health from the University of Texas Health Science Center in Houston. Dr. Nobles notified the committee that he is working on integrating UTK with the Memphis campus' compliance software (iMedris). He notified the committee that there has been a national push to have full coverage of all materials to maintain lab safety on campuses, and urged the committee that a documented decision needed to be made on the purview of teaching materials.

Other: Installation of BSL-3 Lab

Brian Ranger notified the committee that a BSL-3 lab to support hantavirus research is being investigated. He and Dr. Nobles are currently looking into costs, timeframes and space availability at the UT Knoxville-area campuses to assess feasibility.

The meeting was adjourned at 4:45 PM.

The next meeting has tentatively been scheduled for March 12, 2014.