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FALL 2018 NEWSLETTER

Biosafety Program

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Engelmann Hall, Room 270

News in Biosafety

[Is CRISPR/ Cas9 damaging genomes at a higher rate than previously thought?](#)

Wellcome Sanger Institute researchers observed significant on-target mutagenesis, such as large deletions and more complex genomic rearrangements at the targeted sites in mouse embryonic stem cells, mouse hematopoietic progenitors and a human differentiated cell line. Click the title to link to the article published in Nature, July 2018.

[How is safety being assessed when conducting nanomaterials research in animals?](#)










The National Institute for Occupational Safety and Health evaluated nanomaterials studies in animals and the risks to researchers associated with handling nanomaterials. Learn more about best practices by clicking the title link.

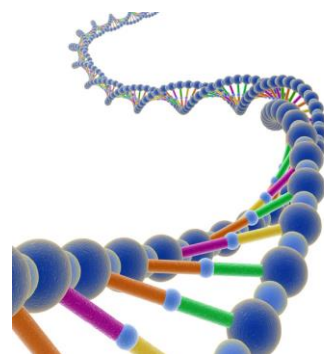


Do you need a Biosafety Protocol?

Most biological research requires registration and approval at UWM

All researchers at UWM that manipulate/ utilize any of the following biological agents are required to complete an IBC registration form to submit for Biosafety Program and Institutional Biosafety Committee (IBC) approval:

-  Recombinant (transgenic) or synthetic DNA/ RNA materials
-  Microbes and disease-causing agents including: bacteria, archaea, viruses, fungi, protozoa, parasites, and prions
-  Large scale propagation of culture consisting of a volume >10L in a single culture vessel
-  Human cells and cell culture, organs, or tissues, or biological samples, including blood, saliva, urine, and stool samples
-  Non-human cells and cell culture, organs or tissues, or biological samples that are infectious, potentially infectious, or recombinant
-  Animals (vertebrate and/ or invertebrate) that are recombinant (transgenic), exotic, and/ or grown in association with pathogens and/ or recombinant materials
-  Plants that are recombinant (transgenic), exotic, and/ or grown in association with pathogenic or recombinant microbes and/ or pathogenic or recombinant small animals (insects, etc.)
-  Biologically-derived toxins (not including toxic chemicals or antibiotics)
-  Teaching laboratories that use any of the materials listed above.



Additionally, use of any of these materials in your teaching laboratories in addition to research laboratories requires IBC review.

More information can be found at: <https://uwm.edu/safety-health/ibc/>

Preparing a protocol >>>

Preparing a biosafety protocol for submission

What do you need to submit?
IBC Registration Form, found at:
<https://www.uwm.edu/safety-health/ibc>

All required supplements as prompted in registration form and the appropriate appendices.

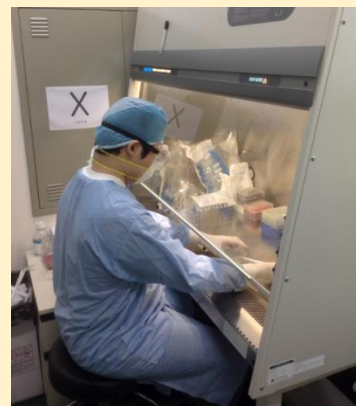
Quick Guide

Review the protocol file before completing. The first 9 pages are required for all PIs. The appendices are required for specific situations (i.e. animals, recombinant DNA, human cells/ tissues and primate cells/ tissue, etc.).



Protocols do not go to review until all parts have been completed. Initial review will be conducted by the biosafety program office, then if it warrants IBC review, it will be assigned to a meeting if the protocol is ready for review.

All research being conducted in BSL-2 and higher laboratories must be approved by the IBC prior to conducting work. It is the responsibility of the PI to maintain a biosafety manual in their laboratory and provide this with their protocol submission.



All research involving research that falls under Sections III-A, III-B, III-C, III-D, and III-E of the NIH Guidelines requires IBC approval. Please submit forms with ample time for protocol review and approval.

Questions? Contact the Biosafety Officer, Danielle Rintala, at (414) 588-4261 or rintala@uwm.edu for assistance.



The Biosafety Program has been working on the protocol submission software that will be implemented in the future for IBC protocol submissions. Stay tuned for more information in the coming months as we work towards moving to electronic protocol submissions. During the present time, all protocol submissions will continue to be submitted via e-mail to uwm-biosafety@uwm.edu.

Bloodborne pathogens training is an annual training requirement. All researchers and lab personnel can complete their training through CITI Program. Visit: <https://uwm.edu/safety-health/bbp-2/> for more information about annual training.

NIH Revisions >>>

Revisions to the NIH Guidelines for Research Involving Recombinant and Synthetic Nucleic Acid Molecules

The National Institutes of Health released a proposal for public comment on August 16, 2018, to amend the NIH Guidelines to streamline oversight for human gene transfer clinical research protocols and reduce duplicative reporting requirements. Specifically, NIH proposes removing the NIH protocol submission, review, and reporting requirements under Appendix M of the NIH Guidelines. Furthermore, the NIH proposes to modify the roles and responsibilities of the Recombinant DNA Advisory Committee (RAC).

To review the proposed revisions, visit the Federal Register at: <https://www.federalregister.gov/documents/2018/08/17/2018-17760/national-institutes-of-health-nih-office-of-science-policy-osp-recombinant-or-synthetic-nucleic-acid>

Note: At this time, this does not impact any current research protocols at UWM. All research protocols at UWM fall under either Section III-D, III-E, or III-F of the NIH Guidelines.



National Institutes of Health

**ABSA
INTERNATIONAL**

OCTOBER 2018 Biosafety Month



How do you incorporate biosafety principles into your laboratory? ABSA International is celebrating the 5th annual Biosafety Month in October by encouraging you to share how you **#getyourcultureon**.

The 2018 Biosafety Month is a period of time when individuals and organizations are encouraged to focus on and reinforce their attention to biosafety and biosecurity standards.

2018 Biosafety Month will coincide with the 61st Annual Biological Safety Conference in Charleston, South Carolina on October 12-17, 2018.

The UWM Biosafety Program will be distributing Biosafety Materials during the month of October to help you replenish your biohazard spill kits, learn more about the products available on the market for biosafety and disinfection, and provide you with resources for purchasing additional materials for your research/teaching laboratories.

In addition, biosafety training is provided throughout the year for all researchers at UWM working with biological materials. The Biosafety program continues to work on writing clear, concise SOPs to support research safety. Our biosafety audits provide you with the information necessary to maintain a safe research environment. Over the last year, the program has been busy to develop a comprehensive program that supports our research community and protects research personnel, surrounding community, and the environment. To provide additional feedback, ideas, or address biosafety and biosecurity related issues, do not hesitate to contact Danielle Rintala, BSO, at rintala@uwm.edu.

Ask the Biosafety Officer >>>

Q: Do I need to submit an IBC protocol for experiments with genetically modified animals which doesn't require an IACUC protocol (fruit flies, roundworms, nematodes, etc.)?

A: Yes, work with these animals requires a Biosafety Protocol even though an IACUC Animal Protocol is not needed. All genetically modified animal experiments outside of the limited rodent exceptions must have IBC approval prior to starting or continuing work. Failure to obtain approval can result in reporting to the NIH. See Section III-D-4 of the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules at <https://osp.od.nih.gov/biotechnology/nih-guidelines/> for more information.



Elements of a Spill Kit

- ❖ PPE: Disposable back-tying gown, foot covers, hair cover, gloves, splash goggles, face mask
- ❖ Spill Clean-up: Absorbent material, autoclavable biohazard bag, tongs/ forceps (for picking up broken sharps), brush and dustpan, biohazard stickers, sharps container, access to bleach or other appropriate disinfectant
- ❖ Keep a copy of the spill protocol with the kit, and a copy of the exposure control plan (BSL-2 and higher).

Highlight®: The new standard of infection prevention

Kinnos is a small company that produces an EPA-approved additive for bleach solutions to be used in laboratories. It makes a bleach solution blue, with the color dissipating over a three-minute contact time (which helps the personnel applying the disinfectant increase accuracy of contact time).

When the Biosafety Program distributes the Biosafety Bags in October look for a sample provided to you by the Biosafety Program to use in your laboratory.

Learn more about Kinnos at:
<https://www.kinnos.us/home/>



Fall IBC Meeting Schedule and Protocol Submission Deadlines

- ☠ Friday, September 14, 2018. Lapham Hall S185, 1:00-3:00 PM
 - Deadline to submit for consideration: August 31, 2018
- ☠ Friday, October 12, 2018. Lapham Hall S185, 1:00-3:00 PM
 - Deadline to submit for consideration: September 28, 2018
- ☠ Friday, November 9, 2018. Lapham Hall S185, 1:00-3:00 PM
 - Deadline to submit for consideration: October 26, 2018
- ☠ Friday, December 14, 2018. Lapham Hall S185, 1:00-3:00 PM
 - Deadline to submit for consideration: November 30, 2018

Fall Biosafety Training Opportunities

Who needs it?

Everyone working with biologically hazardous materials; required for IBC protocol approval

Required: Every three years

- ☠ Wednesday, August 29, 2018 9:00 AM-12:00 PM, Lapham Hall N101
- ☠ Wednesday, September 5, 2018 12:30-3:30 PM, Engelmann Hall 242/248
- ☠ Monday, September 17, 2018 9:00 AM- 12:00 PM, Engelmann Hall 242/248
- ☠ Wednesday, October 5, 2018 12:30-3:30 PM, Engelmann Hall 242/248
- ☠ Wednesday, November 7, 2018 12:30-3:30 PM, Engelmann Hall 242/248
- ☠ Wednesday, December 5, 2018 12:30-3:30 PM, Engelmann Hall 242/248

Register online at: <https://uwm.edu/safety-health/biosafety-training/>

Fall NIH Guidelines Training Opportunities

Who needs it?

Anyone working with rDNA, synthetic nucleic acids, genetically-modified animals (transgenic mice, zebrafish, etc.), or plan on creating modified-organisms. This is in addition to biosafety training and any other pertinent training.

Required: Every three years

- Wednesday, August 29, 2018 1:00 -3:00 PM, Engelmann Hall 242/248
- Wednesday, September 12, 2018 1:00-3:00 PM, Engelmann Hall 242/248
- Friday, September 21, 2018 10:00 AM- 12:00 PM, Engelmann Hall 242/248
- Monday, October 8, 2018 10:00 AM- 12:00 PM, Engelmann Hall 242/248
- Monday, November 12, 2018 1:00-3:00 PM, Engelmann Hall 242/248
- Monday, December 10, 2018 10:00 AM-12:00 PM, Engelmann Hall 242/248

Register online at: <https://uwm.edu/safety-health/biosafety-training/>