University of Wisconsin-Madison
Dual Use Research of Concern
Principal Investigator Responsibilities Policy
R. Moritz
Draft: 08/11/2015
Revised: 08/27/2015
Approved: IBC- 09/02/2015, BTF- 09/09/2015

The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern. This policy requires Principal Investigators (PI) to notify the Institutional Review Entity (IRE) as soon as their research, both USG- or privately funded, meets any of the following criteria:

- Research directly involves non-attenuated forms of one or more of the listed agents*.
- Research with non-attenuated forms of one or more of the agents also produces, aims to produce, or can be reasonably anticipated to produce one or more of the seven listed experimental effects**.
- PI concludes that his or her research with non-attenuated forms of one or more of the listed agents that also produces, aims to produce, or can be reasonably anticipated to produce one or more of the seven listed experimental effects may meet the definition of DURC and should be considered or reconsidered by the IRE for its DURC potential.

The Dual Use Research of Concern (DURC) Subcommittee, described in detail in the DURC Subcommittee Policy, will serve as the IRE for the University of Wisconsin-Madison.

PIs at the University of Wisconsin-Madison will comply with the USG Policy as follows:

- PI will conduct an assessment of the DURC potential of their research by filling out the Notification of Potential DURC Form located on the Office of Biological Safety's website on the DURC page (http://www.ehs.wisc.edu/notificationofdurcform.htm).
- Immediately notify the Institutional Contact for Dual Use Research (ICDUR) when his or her research meets one of the three criteria described above by using the form listed above.
- Work cooperatively with the DURC Subcommittee to assess the risks of his or her research and aid in the development of risk mitigation plans as needed.
- Conduct DURC in accordance with the risk mitigation plan.
- Provide the DURC Subcommittee with updates in regards to the progress and results of DUR and DURC research as requested by the Subcommittee.
- Submit all manuscripts and presentations associated with DUR or DURC research to the ICDUR for review.
- Comply with all institutional and USG policies regarding DURC.

- Ensure his or her researchers have received the appropriate DURC training.
- Communicate DURC in a responsible manner.
- Report any instances of noncompliance with institutional and/or USG policies to the ICDUR.

* Agents covered by USG Policy

Avian influenza virus (highly pathogenic)
Bacillus anthracis
Botulinum neurotoxin (all amounts)
Burkholderia mallei
Burkholderia pseudomallei
Ebola virus
Foot-and-mouth disease virus
Francisella tularensis
Marburg virus
Reconstructed 1918 Influenza virus
Rinderpest virus
Toxin-producing strains of *Clostridium botulinum*
Variola major virus
Variola minor virus
Yersinia pestis

** Categories of Experimental Effects

- Enhance the harmful consequences of a biological agent or toxin
- Disrupt immunity or the effectiveness of an immunization without clinical and/or agricultural justification
- Confer to a biological agent or toxin, resistance to clinically and/or agriculturally useful prophylactic or therapeutic interventions against that agent or toxin or facilitate their ability to evade detection methodologies
- Increase the stability, transmissibility, or the ability to disseminate a biological agent or toxin
- Alter the host range or tropism of a biological agent or toxin
- Enhance the susceptibility of a host population
- Generate a novel pathogenic agent or toxin or reconstitute an eradicated or extinct biological agent

University of Wisconsin-Madison
Dual Use Research of Concern
ICDUR Responsibilities Policy
R. Moritz
Draft: 08/10/2015
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The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern. This policy requires the university to designate an Institutional Contact for Dual Use Research (ICDUR) to serve as the institutional point of contact for questions regarding compliance with and implementation of the requirements of the policy. The ICDUR will serve as the liaison between the university and the relevant program officers at the USG funding agencies and, for non-USG funded research, between the university and NIH (or other USG agencies as indicated by NIH).

The ICDUR at the University of Wisconsin-Madison will also:

- Develop and review internal policies related to DURC.
- Serve as liaison between the principal investigators (PIs) and the DURC Subcommittee.
- Provide review materials to the DURC Subcommittee prior to the scheduled meeting.
- Serve as chair of the DURC Subcommittee and participate in DURC reviews.
- Conduct DURC reviews of individual experiments and presentations as needed.
- Write DURC Subcommittee reports and assessments and coordinate review by the Subcommittee.
- Provide DURC Subcommittee reports and assessments to the IBC and BTF for review.
- Notify the USG within 30 days of the DURC Subcommittee review.
- Assist the PI and DURC Subcommittee in the development and review of risk mitigation plans within 90 days of USG notification.
- Schedule annual review of research grants to ensure the DURC assessment has not changed.
- Schedule annual reviews of risk mitigation plans to ensure the plans still mitigate the risks associated with the research.
- Notify the USG of any changes to the DURC assessment or risk mitigation plan within 30 days.
- Provide DURC training to researchers and committee members as needed, ensuring all researchers and reviewers have received the appropriate DURC training for their roles.
- Maintain all records pertaining to DURC reviews and the development and review of risk mitigation plans.
- Ensure PI and research compliance with DURC policies and risk mitigation plans.

- Report any instances of noncompliance with the USG policy, as well as mitigation measures undertaken by the institution to prevent recurrences of similar noncompliance, within 30 days to the USG funding agency or NIH for non-USG funded research.

University of Wisconsin-Madison
Dual Use Research of Concern
DURC Subcommittee Policy
K. Bernard & R. Moritz
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Revised: 08/27/2015
Approved: IBC- 09/02/2015, BTF- 09/09/2015

The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern for the composition and role of its Institutional Review Entity (IRE). The Dual-Use Research of Concern (DURC) Subcommittee will serve as the IRE and consist of five Institutional Biosafety committee (IBC) members or appointed consultants, who have been fully trained to serve on/for the IBC and have signed the confidentiality agreement. The Subcommittee must have the expertise to evaluate the science and will be comprised of members who have expertise in virology, bacteriology, and infectious disease. In addition, the Subcommittee must have individuals with expertise to assess dual use potential for a range of life sciences research, who are well versed in relevant USG policies, who have the understanding of risk assessment and risk management including biosafety and biosecurity and are familiar with institutional policies, commitments, and standard operating procedures. If the members do not have the necessary expertise, an IBC member with the appropriate expertise may be added or asked to act as a consultant.

The DURC Subcommittee will consist of the following individuals:

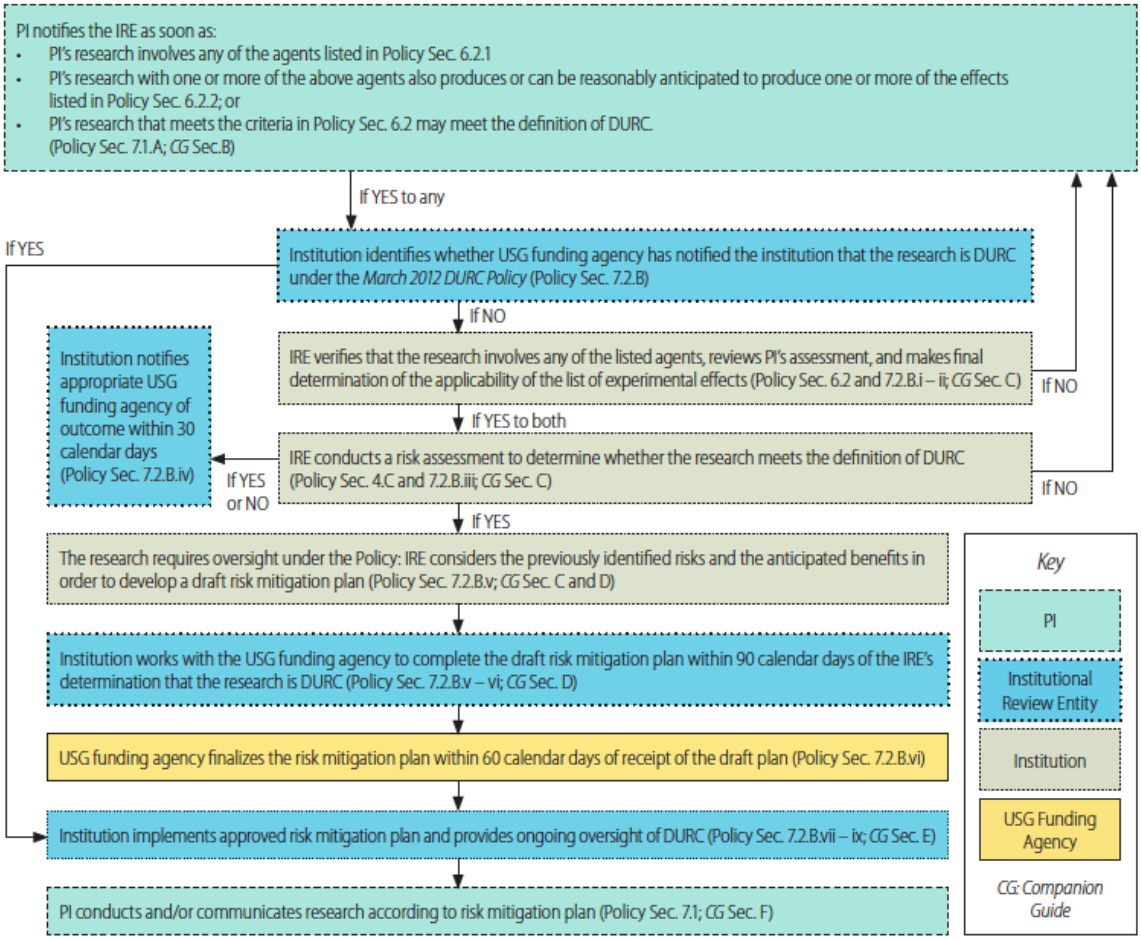
Three standing members:
These will be scientific experts, responsible for reviewing DURC materials (e.g. grants, research proposals, and manuscripts), writing the DURC report, and presenting the report to the IBC. These members will have expertise in virology, bacteriology, public health, and/or infectious diseases.

Two ex officio members:
The Institutional Contact for Dual Use Research (ICDUR) will be an *ex officio* member and Chair of the DURC Subcommittee. This individual will be responsible for communicating the need for DURC review, coordinating and providing materials for subcommittee meetings, assisting with compiling the DURC report, and communicating with UW-Madison's Biosecurity Taskforce and the funding agencies. She/he also will be responsible for communication to Responsible Official and university administration as needed.
The Chair of the IBC will also be an *ex officio* member of the DURC Subcommitee. This individual will assist with knowledge of DURC regulations and provide scientific expertise. She/he also will be responsible for communication to Office of Biosafety and others as needed.

DURC Review Process

- Chair of DURC Subcommittee will notify members of upcoming review and provide materials for review.
- If Subcommittee members have a conflict of interest per the IBC guidelines, they will be replaced with other IBC members with appropriate scientific expertise.
- If a Subcommittee member is not available or other scientific expertise is needed for the particular review, a Subcommittee member may be replaced temporarily with an IBC member who has the appropriate expertise.
- If additional expertise is needed, the Subcommittee will invite consultants to aid in the DURC review.
- The Subcommittee will review materials and discuss specific questions for DURC review.
- If the research is determined to be DURC, a DURC report will be drafted and circulated to the subcommittee for edits.
- The final draft of the report will be made available to the IBC committee members prior to the IBC meeting.
- The Subcommittee will present the DURC report to the IBC, which will vote on the report with or without possible contingencies that may be raised during discussion.
- The IBC-approved DURC report will be provided to the UW Biosecurity Taskforce for discussion, editing, and approval.
- The final DURC report will be sent to the NIH/NIAID or other funding agency as needed.
- If the material is a manuscript and it contains DURC, a letter of support written by the ICDUR will be provided to the PI and submitted with the manuscript to the journal of choice.

Process for Institutional Review of Life Sciences Research within the Scope of the Policy



University of Wisconsin-Madison
DURC Review Process and Risk Assessment Policy
R. Moritz
Draft: 08/13/2015
Revised: 08/28/2015
Approved: IBC- 09/02/2015, BTF- 09/09/2015

The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern for the review and risk assessment of potential Dual Use Research of Concern (DURC). The DURC Subcommittee, which is a subcommittee of the Institutional Biosafety Committee (IBC), will serve as the primary reviewer of potential research for DURC. The process the DURC Subcommittee will use to review research is described below.

Initial Principal Investigator Review

The USG Policy requires that principal investigators conduct an assessment of their work before it begins and provide it to the DURC Subcommittee for review. This will be done using the Notification of Potential DURC Form located on the Office of Biological Safety's website on the DURC page. This form will be emailed to the Institutional Contact for Dual Use Research (ICDUR) for review and follow up. The ICDUR will contact the principal investigator (PI) to obtain the materials for the DURC Subcommittee to review in addition to the initial PI assessment.

DURC Subcommittee Review and Risk/Benefit Assessment

The ICDUR will notify DURC Subcommittee members of the need for the upcoming review and provide materials for review before the agreed upon scheduled meeting time to allow each member to independently determine whether or not they feel the research is potentially DURC. Whenever possible the members of the DURC Subcommittee will meet in person to discuss the research and their findings. The review will be based upon whether or not the research could result in one or more of the following seven experimental effects described in the USG Policy:

- Enhance the harmful consequences of a biological agent or toxin.
- Disrupt immunity or the effectiveness of an immunization without clinical and/or agricultural justification.
- Confer to a biological agent or toxin, resistance to clinically and/or agriculturally useful prophylactic or therapeutic interventions against that agent or toxin or facilitate their ability to evade detection methodologies.
- Increase the stability, transmissibility, or the ability to disseminate a biological agent or toxin.
- Alter the host range or tropism of a biological agent or toxin.
- Enhance the susceptibility of a host population.

- Generate a novel pathogenic agent or toxin or reconstitute an eradicated or extinct biological agent.

If the DURC Subcommittee determines the research will not result in one of the seven experimental effects described above, the research does not require further review. However, if there is a change in the research that could reasonably produce one of the seven experimental effects, the PI must notify the ICDUR and supply a revised assessment.

If the DURC Subcommittee determines the research under review could potentially result in one or more of the experimental effects described above, then the work is at a minimum dual use research (DUR). The subcommittee will then perform a risk/benefit assessment to determine if the research is DURC (research that could reasonably be misapplied to pose a significant threat) using the criteria below:

- Could the knowledge, information, technologies, or products from this research be misused?
    - What types of knowledge, information, technologies, or products are generated from this research?
    - How will the results or products of the research be shared or distributed?
    - How novel is the information provided by the research or the methods utilized?
    - Are the research products applicable to more common or less pathogenic agents?
    - Does the research highlight vulnerabilities in existing countermeasures or public health or agriculture infrastructure?
- With what ease could the knowledge, information, technologies, or products possibly be directly misused? What is the feasibility of misuse?
    - What level of technical skill and sophistication is required to use the information contained in this project for harmful purposes?
    - Are the materials, equipment, or reagents required for misuse expensive or difficult to procure?
    - Will the product of the research be directly misused to pose a threat to public health and safety, agriculture, plants, animals, the environment, material, or national security? If there could be misuse, what is the time frame for it?
- What are the potential consequences of misuse of this research? (Include scope, magnitude, and nature of)
    - Are there available countermeasures?
    - How readily are they available?
- What are the benefits of this research?
    - Will the knowledge, information, or technology generated from this research be broadly applicable?
    - What populations will be positively affected?

- In what time frame might this research benefit or pose a risk to science, public health, agriculture, plants, animals, the environment, material, or national security?
- Can the information be applied to improvements in surveillance or the development of countermeasures? What evidence supports this?
- What is the time frame for the potential benefits or anticipated risks to be realized?
- How might the potential benefits and anticipated risks be distributed across different populations?
- Who or what will bear the anticipated risks? Will the distribution be fair or just?

After conducting the analysis and weighing the risk and benefits, the DURC Subcommittee will determine whether or not the research is DUR or DURC and, if it is DURC, whether or not it should proceed. If it should proceed, there will be a discussion of what risk mitigation measures are warranted. This discussion will be relayed to the PI by the ICDUR. The ICDUR will work with the PI to develop a risk mitigation plan that will be reviewed by the DURC Subcommittee and subsequently sent to the USG Funding Agency for approval. The ICDUR will consult with the USG Funding Agency and ask for guidance if: 1) the DURC Subcommittee cannot determine whether or not the research is DUR or DURC; 2) the scope of the research falls outside of the USG Policy, but presents a significant risk; or, 3) clarification is required about the USG Policy.

The ICDUR will incorporate the answers to the questions listed into a report that the DURC Subcommittee will review. This report will then be reviewed by the IBC and BTF if the research is determined to be DURC.

If the research does not meet the criteria listed in the USG policy, and would not result in one or more of the seven experimental effects, the risk benefit analysis will not be conducted and the report will not be reviewed by the IBC or BTF.

If the research does meet the criteria listed in the USG policy, but does not meet the definition of DURC based upon the risk benefit analysis, the report will not be reviewed by the IBC or BTF.

It is important to note that the DURC Subcommittee will also review products of research determined to potentially contain DURC, including manuscripts. The PI is responsible for sending all manuscripts for research potentially containing DURC to the DURC Subcommittee for review before submission to his/her journal of choice. The ICDUR will review individual experiments and presentations for DURC and seek advice of the DURC Subcommittee when needed.

The ICDUR will keep all documentation for the DURC Subcommittee reviews and assessments.

University of Wisconsin-Madison
Dual Use Research of Concern
Development and Review of Risk Mitigation Plans Policy
R. Moritz
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Revised: 08/28/2015
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The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern (DURC). This policy requires the development of a risk mitigation plan for DURC research and is based upon the risk and benefits assessment. A copy of the draft risk mitigation plan must be sent within 90 days of the DURC Subcommittee's determination that the research is DURC to: 1) the USG funding agency for federally funded research; or 2) for non-federally funded research, to the USG agency, designated by NIH, for review and final approval. In addition, all risk mitigations plans must be revised as needed and reviewed on an annual basis.

USG Policy Requirements of Risk Mitigation Plan

Some basic information is required for a risk mitigation plan as follows:

- Name and contact information for principal investigator (PI).
- Name and contact information for the authorized institutional official.
- Name and contact information for the Institutional Contact for Dual Use Research (ICDUR).
- Dates and details of the reviews and assessment of the research by the Institutional Review Entity (IRE).
- Dates and details of the PI's initial review or ongoing assessment of the research.
- Identification of whether or not the research has been identified as DURC under the March 2012 DURC Policy.
- Details of the risks identified by the IRE in its review of the research, and an explanation of the risk mitigation strategy or strategies that are being implemented by the institution to address those risks.
- Other materials, such as proposals and progress reports related to the research that may be requested by the USG agency.

Development of Risk Mitigation Plan

The DURC Subcommittee will review the proposed biosafety and biosecurity measures under which the DURC will be conducted as part of the risk/benefit assessment. The ICDUR will work with the PI to develop a draft of the risk mitigation plan incorporating the results of the risk/benefit assessment. This will include the guidelines and requirements of BMBL, the NIH Guidelines, and the Select Agent Regulations. In addition, the risk/benefit assessment will be used to determine whether or not additional biosafety or biosecurity measures are warranted for conducting the research.

In addition to the requirements stated above, University of Wisconsin-Madison risk mitigation plans will incorporate the following information at minimum:

- Any experimental modifications
- Enhanced biosafety and biosecurity measures
- Description of the personal protective equipment
- Screening of personnel
- Occupational health requirements
- Research program oversight
- Evaluation of medical countermeasures
- Determination of the venue and mode of communication for the research
- Description of the DURC training researchers have received
- Brief description of the university's review process

The draft risk mitigation will then be reviewed by the DURC Subcommittee before the ICDUR sends it to the relevant program officer at the USG agency funding the research or in the event of non-federal funded research to the NIH-appointed USG agency for review and final approval. The DURC research cannot begin until the risk mitigation plan is approved by the USG agency.

In the event the DURC Subcommittee requires assistance in developing a risk mitigation plan or in the event the only viable risk mitigation measures are to not conduct the research in question or to not communicate the results, the ICDUR will contact the USG funding agency for consultation.

Review of Risk Mitigation Plans

The DURC Subcommittee will review active risk mitigation plans at least annually and when the plans have been revised. The ICDUR will set a schedule for the review of the plans and contact the appropriate USG agency within 30 days of any changes to the risk mitigation plan or status of the DURC research at the university. The DURC Subcommittee will use the following criteria to review a risk mitigation plan:

- Review the research to verify that it still directly involves non-attenuated forms of one or more of the agents covered by the USG Policy.
- Assess whether or not the research still produces, aims to produce, or can be reasonably anticipated to produce one or more of the listed experimental effects.
- Determine whether or not the research still meets the definition of DURC.
- Review and revise the risk mitigation plan as needed.

University of Wisconsin-Madison
Dual Use Research of Concern
DURC Decision Appeal Process Policy
R. Moritz
Draft: 08/13/2015
Revised: 08/27/2015
Approved: IBC- 09/02/2015, BTF- 09/09/2015

The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern (DURC). This policy requires an institution to have an appeal process for a principal investigator (PI) in the event he or she does not agree with the determination of the research as DURC. The DURC Subcommittee, which is a subcommittee of the Institutional Biosafety Committee (IBC), will serve as the primary reviewer of potential DURC research.

In the event a PI does not agree with the findings of the DURC Subcommittee, he or she can state why they disagree with the finding and request the DURC Subcommittee to review the research again. If the PI and DURC Subcommittee do not come to an agreement, the Institutional Contact for Dual Use Research (ICDUR) will request outside advice from the program officer for the USG funding agency. For research funded by private funds, the ICDUR will request advice from NIH.

University of Wisconsin-Madison
Dual Use Research of Concern
Education and Training Policy
R. Moritz
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The University of Wisconsin-Madison will meet the requirements stated in the United States Government (USG) Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern. This policy requires institutions to provide education and training on Dual Use Research of Concern (DURC) for individuals conducting life sciences research with one or more of the agents listed in the USG Policy and to maintain records of such education and training for the term of the research grant or contract plus three years after its completion.

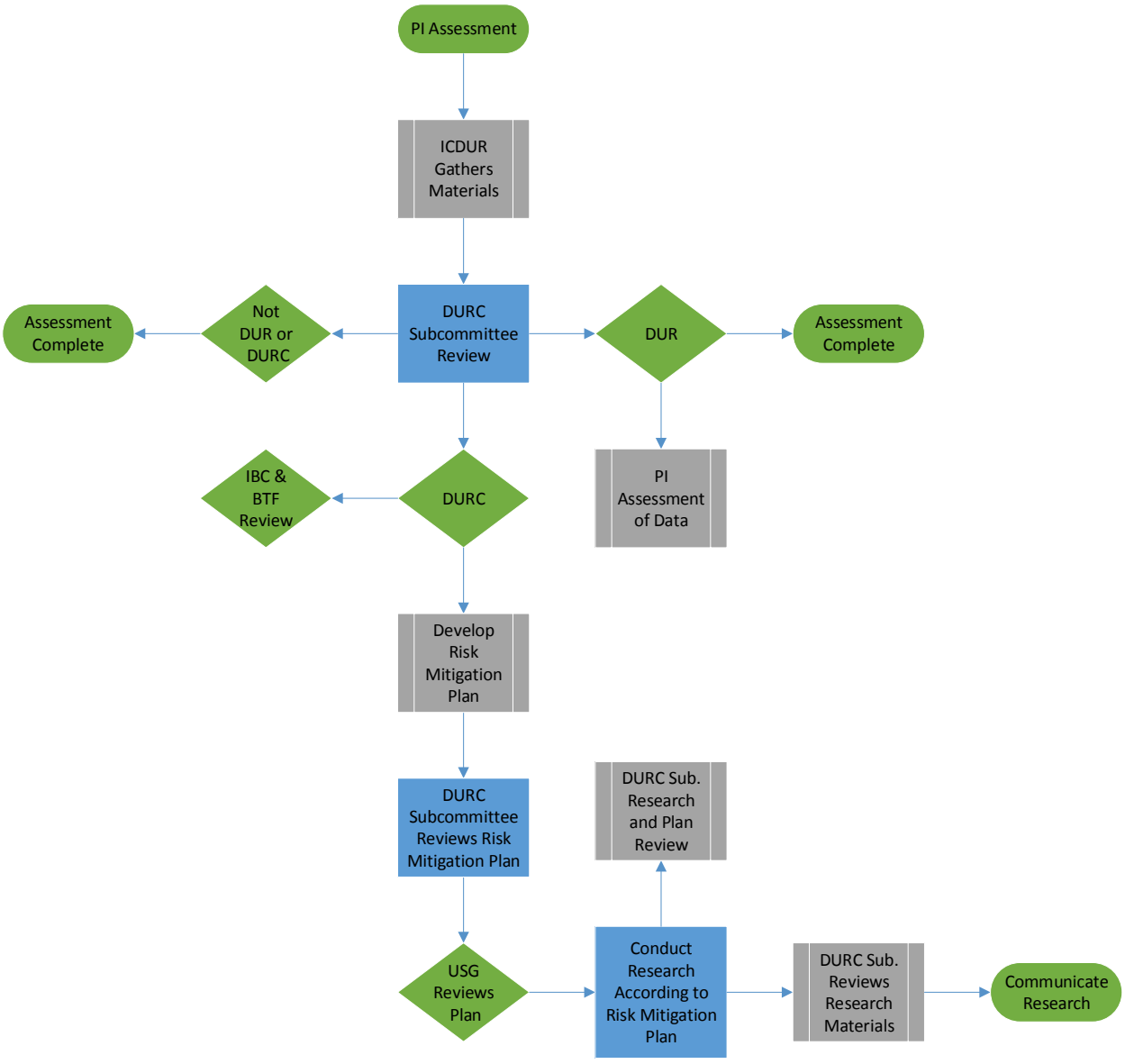
The Institutional Contact for Dual Use Research (ICDUR) will ensure education and training materials are available to all principal investigators (PI) and researchers at the University of Wisconsin-Madison as well as members of the Institutional Biosafety Committee (IBC) and Biosecurity Task Force.

The education and training requirements will include:

- Training describing DURC and the USG Policy fundamentals as well as the University of Wisconsin-Madison DURC review process.
- Scenario training covering the different combinations of research that require the individual to assess the risk of the research and determine whether or not they are DURC and, thus, fall under the USG Policy.
    - Research with one of the agents listed in the USG Policy, but none of the seven experimental effects.
    - Research with one of the agents listed in the USG Policy, at least one of the seven experimental effects, and determined to be DUR
    - Research with one of the agents listed in the USG Policy, at least one of the seven experimental effects, and determined to be DURC.
    - Research with an agent NOT listed in the USG Policy, at least one of the seven experimental effects, and determined to be DURC.
- Assessments for each training session will be done to demonstrate understanding and knowledge.

PIs and researchers will be required to take this training every two years.

IBC and Biosecurity Task Force members will be required to receive the training describing DURC and USG Policy fundamentals every three years. New members of the committee will be trained when they join one of the committees.


PI Assessment
ICDUR Gathers Materials
DURC Subcommittee Review
Not DUR or DURC
Assessment Complete
DUR
Assessment Complete
IBC & BTF Review
DURC
PI Assessment of Data
Develop Risk Mitigation Plan
DURC Subcommittee Reviews Risk Mitigation Plan
DURC Sub. Research and Plan Review
USG Reviews Plan
Conduct Research According to Risk Mitigation Plan
DURC Sub. Reviews Research Materials
Communicate Research