

## A Case Study Approach to the Institutional DURC Oversight Policy

### Moderator Instructional Guide

Slide	Page	Talking Points	Questions
7 then 8	2	<ul style="list-style-type: none"> <li>• <b>Let's jump in ... we learn on Page 2 that...</b></li> <li>• Dr. Jameson is a tularemia expert new to Boyle University</li> <li>• He wants to characterize the T3SS pathway in <i>F. novicida</i> through gene modification of T3SS effector proteins</li> <li>• He seeks and gets IBC approval to do the work in BSL2 conditions</li> </ul>	<p>Large Group:</p> <p><b>1. Is this experiment subject to the Policy?</b></p> <p>1a. What information in the case study hints at whether it is covered by the Policy?</p> <p>1b. Where would we find supporting reference information to help answer this question? (<a href="http://www.selectagents.gov">www.selectagents.gov</a>)</p>
9	3	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 3</b></li> <li>• He wants to characterize T3SS in <i>F. tularensis</i> through gene modification of T3SS proteins</li> <li>• He wants to disrupt T3SS pathways</li> <li>• He asks the IBC Chair, Dr. Greenore, how to get approval for the amended IBC registration</li> </ul>	<p>Large Group:</p> <p><b>3. Is this experiment subject to the Policy?</b></p> <p><b>2. What additional information should Dr. Greenore communicate to Dr. Jameson?</b> (provide an overview of the Policy and IRE process)</p>
9	4	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 4</b></li> <li>• <b>For this part, please consult with your neighbors to think about questions 4-7 on page 4 of the CS.</b></li> <li>• Dr. Greenore tells Dr. Jameson that this experiment may be subject to the Policy and that he needs to: <ul style="list-style-type: none"> <li>○ Submit his proposal to the <b>newly established IRE</b></li> </ul> </li> <li>• Dr. Jameson doesn't think his research is DURC and therefore does not need to be reviewed by the IRE.</li> <li>• <b>Highlight this point:</b> Dr. Greenore clarifies that not all research subject to the Policy is DURC but that research on any of the 15 listed agents must <b>STILL</b> be reviewed by the IRE for its potential to be DURC.</li> <li>• Dr. Jameson is told to consult the "ICDUR" for more information</li> </ul>	<p><b>Small group</b></p> <p><b>4. What methods can be used to socialize the Policy to PIs?</b></p> <p>5. How can the institution ID those who need DURC training?</p> <p>6. What are effective strategies for training?</p> <p><b>7. What is the "ICDUR"? Who acts in this role? When should the PI reach out to the ICDUR?</b></p>

9	5	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 5</b></li> <li>• <b>Again, talk with your neighbors to answer questions 8 and 9</b></li> <li>• Here we learn that Dr. Jameson talks with the ICDUR, Mr. Middleton</li> <li>• Mr. Middleton discusses the Policy, how the university will implement the policy, and the role of the IRE</li> <li>• <b>Mr. Middleton also describes the constitution of the IRE.</b></li> <li>• <b>Let's look at Questions 8b and 9</b></li> <li>• <b>Let's look at Question 8a</b></li> </ul>	<p><b>Small group</b></p> <p><b>8b.</b> How would you best communicate the function of the IRE?  <b>9.</b> Is the IRE appropriately constituted?</p> <p>-----</p> <p><b>8a.</b> Dr. Jameson concludes that since he will work with an agent covered by the Policy that his research is DURC and will require a risk mitigation plan. <b>Is he correct in his understanding?</b></p>
9 then 10	6	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 6</b></li> <li>• Mr. Middleton explains the 3 factors that must be evaluated before research is considered DURC under the Policy</li> <li>• The IRE conducts the review of the research: <ul style="list-style-type: none"> <li>○ The research is within the scope of the Policy</li> <li>○ However, the <b>research will NOT produce any of the seven experimental effects</b> listed in the Policy</li> </ul> </li> <li>• <b>The IRE concludes that the research is not DURC</b></li> <li>• <b>The IRE asks Dr. Jameson to alert them if his experimental details change in the future.</b></li> </ul>	<p><b>10.</b> What are some important messages to take from the IRE's review of Dr. Jameson's research?</p>
11	7	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 7</b></li> <li>• Here, Dr. Jameson will introduce a gene mutation to a F. tularensis surface protein in hopes to modify the antigenicity of F. tularensis.</li> <li>• He hypothesizes that this modification will enhance the ability of tularensis to survive and replicate in cells.</li> <li>• <b>Highlight this point:</b>  The <u>clinical significance</u> of this experiment is that the modification may decrease the ability of neutralizing antibodies to recognize a tularensis infection – allowing tularensis to potentially evade host immunity.</li> </ul>	<p><b>11.</b> Since Dr. Jameson plans a modification of his experimental aim with the existing research plan, when is it most appropriate for him to consult the IRE? (<b>before the work on the new aim begins</b>)</p>

12	8	<ul style="list-style-type: none"> <li>• <b>On Page 8, we learn that ...</b></li> <li>• The IRE decides to review the new proposal to determine if any of the experimental details might produce one or more of the seven listed experimental effects.</li> <li>• <b>Let's look carefully at the experimental details on pages 7 and 8.</b></li> </ul>	<p><b>Small group:</b></p> <p><b>12.</b> Which, if any, of the seven listed experimental effects does the research aim to produce?</p> <p><b>13.</b> If so, what are the next steps?</p>
13 then 14	9	<ul style="list-style-type: none"> <li>• <b>On Page 9, we learn that ...</b></li> <li>• The IRE concludes that the research will aim to produce two of the 7 listed experimental effects (<b>criteria #2</b>).</li> <li>• Now the IRE must consider whether the research meets the definition of DURC under the Policy.</li> <li>• <b>Let's consult with our neighbors to review the experimental details and answer Questions 14 – 17</b></li> </ul>	<p><b>Small group:</b></p> <p><b>14.</b> Do you think the research meets the definition of DURC?</p> <p><b>15.</b> Does the IRE need additional information to determine whether the research is DURC?</p> <p><b>16.</b> Does everyone in your group agree?</p>
15 then 16 then 17	10	<ul style="list-style-type: none"> <li>• <b>On Page 10, we learn that ...</b></li> <li>• The IRE determines that the research meets the definition of DURC under the Policy(<b>criteria #3</b>)</li> <li>• <b>Highlight this point:</b> <b>The IRE further directs that research cannot begin until a risk mitigation plan has been developed and approved by the funding agency.</b></li> <li>• <b>Let's take a step back and now consider our notification requirements under the Policy. Review questions 17 and 20.</b></li> <li>• <b>Consult with your neighbors to think about Question 18.</b></li> </ul>	<p><b>17.</b> What notifications are required to be made and in what time frame? (<b>30 days to notify funding agency after decision</b>)</p> <p><b>20.</b> How long after determining a project meets DURC does the institution have to submit a risk mitigation plan to the funding agency? (<b>within 90 days of the IRE decision</b>)</p> <p><b>18.</b> Would the IRE have to take any action if they determined that the research did NOT meet DURC? (<b>yes, notify decisional outcome once criteria 1 and 2 are met</b>)</p>
18 then 19	12	<ul style="list-style-type: none"> <li>• <b>Let's move on to Risk Mitigation</b></li> <li>• We have developed the Companion Guide to assist institutions in implementing the policy. <b>The Companion guide contains educational tools and points to consider for developing a risk mitigation plan.</b></li> <li>• We will discuss this in depth later today during the Developing Risk Mitigation Plans panel discussion</li> </ul>	<p><b>19:</b> How is a risk assessment completed? How do you weigh the benefits against the risks? (<b>we will discuss in the RM panel later today</b>)</p>

20	12	<ul style="list-style-type: none"> <li>• <b>Let's move on the Page 12 of the case study</b></li> <li>• Dr. Jameson and the IRE need to develop a risk mitigation plan.</li> <li>• The IRE takes into account considerations for appropriate biosafety and biosecurity measures.</li> <li>• Dr. Jameson proposes his own measures for <b>BSL3-E</b> ... <ul style="list-style-type: none"> <li>○ Engineering: Dedicated air handling</li> <li>○ Engineering: HEPA filtered on supply and exhaust</li> <li>○ Engineering: Pass through autoclaves and dunk tanks</li> <li>○ Administrative: Shower out requirements</li> </ul> </li> <li>• <b>Let's consult with our neighbors to think about Question 21.</b></li> <li>• <b>Highlight this point:</b>  Modifications to experimental design might be recommended by the IRE. In this case, the IRE asks Dr. Jameson to restrict his antigenic escape experiments to cell based assays and provide the results of the experiments to the IRE for review before moving on to animal models.</li> </ul>	<p><b>Small group:</b></p> <p>21. Look at Dr. Jameson's planned biosafety and biosecurity measures? <b>Do you believe there are additional measures that the IRE should require?</b> (modifications to experimental design)</p> <p>If not, why are the existing measures sufficient?</p>
21	13	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 13 to discuss considerations regarding the research's impact on the effectiveness of medical countermeasures</b></li> <li>• Here, the IRE considers: <ul style="list-style-type: none"> <li>○ Whether MCM exist</li> <li>○ Whether the new strain is susceptible to these MCM</li> <li>○ Whether the MCM are as effective for this strain as they are for other MCM</li> </ul> </li> <li>• Dr. Jameson provides the following information about antibiotic MCM: <ul style="list-style-type: none"> <li>○ No new antibiotic resistant traits are being introduced</li> <li>○ The new strain is anticipated to still be susceptible to the antibiotics</li> <li>○ <b>It is not known if the antibiotics are as effective against the new strain</b> (which has significantly higher virulence)</li> </ul> </li> </ul>	<p><b>Small group:</b></p> <p>22. Should the IRE conclude that existing MCM are sufficient, based on the information that Dr. Jameson provided?</p> <p>If so, why?</p>
22	14	<ul style="list-style-type: none"> <li>• <b>Let's move on to Page 14</b></li> <li>• Here we address Communication in the Risk Mitigation Plan</li> <li>• The IRE believes that the research should be communicated openly to the fullest extent possible.</li> </ul>	<p>23. What are some ways in which Dr. Jameson can communicate the results of his research?</p>

23	15	<ul style="list-style-type: none"> <li>• <b>On Page 15, we learn that ...</b></li> <li>• <b>The IRE and Dr. Jameson agree that he will:</b> <ul style="list-style-type: none"> <li>○ Ask the funding agency to review his manuscript to provide guidance on responsible communication</li> <li>○ Describe biosafety and biosecurity measures used in his communications</li> <li>○ Emphasize public health benefits of the research, including how MCM development might be improved</li> <li>○ Communicate research results consistent with best practices in the responsible conduct of the research</li> </ul> </li> </ul>	<p>24. The IRE should consider communications that may occur before publication. <b>At what stages in the research continuum might communication about research occur?</b></p> <p>25. What else might the IRE consider in developing a responsible research communication strategy?</p>
24	16	<ul style="list-style-type: none"> <li>• <b>We are about to wrap up, but we must think about training staff on the Risk Mitigation plan.</b></li> <li>• <b>Let's move on to page 16 of the CS</b></li> <li>• The IRE advises Dr. Jameson that he must train his staff on the research elements that constitute DURC and on the Risk Mitigation Plan</li> <li>• Let's look at Questions 26 and 27</li> <li>• <b>Highlight this point:</b> All staff working on any of the 15 listed agents must be trained on DURC. Refresher training must be provided annually.</li> </ul>	<p>26. What are methods Dr. Jameson could employ to train his staff to ensure that they are aware that elements of the research they are conducting are DURC?</p> <p>27. Are there other conditions that should be incorporated into the Risk Mitigation Plan?</p>
25	17	<ul style="list-style-type: none"> <li>• <b>Page 17 – What is the funding agency's responsibility regarding the Risk Mitigation Plan?</b></li> </ul>	<p><b>28. How long after the ICDUR submits the draft Risk Mitigation Plan does the funding agency have to finalize and approve the plan (30 days to respond to the ICDUR and 60 days to finalize the plan)</b></p>
26		Review the DURC Oversight Policy Companion Guide	<a href="http://www.phe.gov/s3/dualuse">www.phe.gov/s3/dualuse</a>