Recombinant or Synthetic Nucleic Acid DNA Experiments Involving Whole Plants or Plant Pests

III-D Experiments require IBC review before procuring materials to initiate experiments.

Section of NIH Guidelines	**Experiments Covered**	**Containment Required (Appendix P)**
III-D-5-a	Experiments involving an exotic plant pathogen with recognized potential for serious detrimental impact on managed or natural ecosystems when rDNA techniques are associated with whole plants.	BL3-P or BL2-P+ (plant) containment . These experiments cannot be conducted at UMBC
III-D-5-b	Experiments involving plants containing cloned genomes of readily transmissible exotic plant pathogens with recognized potential for serious detrimental effects on managed or natural ecosystems	BL3-P or BL2-P+ (plant) containment required when there exists the possibility of reconstituting the complete and functional genome of the infectious agent by genomic complementation in planta. These experiments cannot be conducted at UMBC
III-D-5-c	Experiments involving readily transmissible exotic plant pathogens that have potential of being serious pathogens of a major U.S. crop, such as soybean rust fungus and maize streak.	BL4-P (plant) containment is required. These experiments cannot be conducted at UMBC
III-D-5-d	Experiments involving sequences encoding potent vertebrate toxins introduced into plants or associated organisms. rDNA that encodes for toxin molecules with LD50 of <100 ng/kg for vertebrates falls under Section III-B-1.	BL3-P (plant) containment. These experiments cannot be conducted at UMBC

III-D-5-e	Experiments with microbial pathogens of insects or small animals associated with plants.	BL3-P or BL2-P+ (plant) containment required if rDNA-modified organism has a recognized potential for serious detrimental impact on managed or natural ecosystems. These experiments cannot be conducted at UMBC

III-E Experiments require IBC review before procuring materials to initiate experiments.

Section of NIH Guidelines	**Experiments Covered**	**Containment Required (Appendix P)**
III-E-2-a	Experiments with rDNA-containing plants and plant-associated microorganisms not covered in Section III-E-2-b or other sections of NIH Guidelines	BL1-P (plant) containment if there is no recognized potential for rapid and widespread dissemination or for serious detrimental impact on managed or natural ecosystems
III-E-2-b-(1)	Plants that are modified by rDNA that are noxious weeds or can interbreed with noxious weeds in the immediate geographic area.	PI proposes containment level and the IBC verifies. Must be BL1-P (plant)
III-E-2-b-(2)	Plants in which the introduced DNA represents the complete genome of a non-exotic plant pathogen	PI proposes containment level and the IBC verifies. Must be BL1-P (plant)
III-E-2-b-(3)	Plants associated with rDNA-modified non-exotic microorganisms that have a recognized potential for serious detrimental impact on managed or natural ecosystems.	PI proposes containment level and the IBC verifies. Must be BL1-P (plant)
III-E-2-b-(4)	Plants associated with rDNA-modified exotic microorganisms that have no	PI proposes containment level and the IBC verifies. Must be BL1-P (plant)

	recognized potential for serious detrimental impact on managed or natural ecosystems.	
III-E-2-b-(5)	Experiments with rDNA-modified arthropods or small animals associated with plants, or with arthropods or small animals with rDNA-modified microorganisms associated with them if the rDNA-modified microorganisms have no recognized potential for serious detrimental impact on managed or natural ecosystems.	PI proposes containment level and the IBC verifies. Must be BL1-P (plant)

Reference: NIH Appendix P: http://oba.od.nih.gov/rdna/nih_guidelines_oba.html