According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a collection of information unless it displays a valid OMB control number. The valid OMB control num 0579-0036. The time required to complete this information collection is estimated to average .5 hou reviewing instructions, searching existing data sources, gathering and maintaining the data needed collection of information.	ber for this information collection is rs per response, including the time for	OMB APPROVED 0579-0036 Interagency Report Control No. 0180-DOA-AN
		Fiscal year: FY20
UNITED STATES DEPAR ANIMAL AND PLANT HEA		
	f Research Facil Explanation OR PRINT)	lity
This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36 cease	i). Failure to report accordin and desist.	g to the regulations can result in an order to
1. REGISTRATION NUMBER 51- R- 0018	2. Research Facil University of Maryland, 10S Pine Street, MSTF Baltimore, MD 21201	
3 Number of animals used in the study.	4. Species (comm the study. Nonhuman primate	non name) of animals used in

Some animals may experience pain and/or distress as a sequela to 5% bone-marrow-sparing total body irradiation.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Analgesics (buprenorphine) will be administered when signs of potential pain are observed at any time throughout the study.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	FDA	CFR CFR Title 21 part 58



According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average .5 hours per response, including the time for		OMB APPROVED 0579-0036 Interagency Report Control No. 0180-DOA-AN			
reviewing instructions, searching existing data sources, gathering and maintaining the data nee collection of information.	reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.				
		Fiscal year: FY20			
UNITED STATES DEPA	UNITED STATES DEPARTMENT OF AGRICULTURE				
ANIMAL AND PLANT H	EALTH INSPECTION	SERVICE			
	of Research Faci	lity			
Column	E Explanation				
(7)	(PE OR PRINT)				
This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2 cea	2.36). Failure to report accordin se and desist.	ng to the regulations can result in an order to			
1. REGISTRATION NUMBER	2. Research Faci	lity Headquarters address			
	University of Maryland 10S Pine Street, MSTR				
51- R- 0018	Baltimore, MD 21201	Building, room Groo			
3. Number of animals used in the study.		non name) of animals used in			
3	the study.				
	Sheep				

An artificial lung will be implanted onto the animal. Animals will be restrained in a in a modified metabolic stanchion for 10 days after surgical procedure, during which time it may be difficult for the animal to perform species-specific behavior.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Analgesics, including flunixin meglumine and fentanyl, will be used. Prolonged restraint is necessary to minimize the possibility of dislodgement of cannulae, incisional dehiscence, pneumo-/hemothorax during the recovery period.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	CFR	



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collection of information.		Fiscal year: FY20	
	RTMENT OF AGRIC ALTH INSPECTION of Research Faci E Explanation	SERVICE	
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1. REGISTRATION NUMBER 51- R- 0018	University of Maryland	lity Headquarters address I, Baltimore F Building, room G100	

Potentially painful and/or distressful procedures include hemorrhagic shock and trauma. No supportive care will be given after the surgery other than analgesic.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Analgesics (buprenorphine, meloxicam or carprofen), and local anesthetics (marcaine) are administered after major surgeries.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	CFR



According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to response collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection 0579-0036. The time required to complete this information collection is estimated to average .5 hours per response, including the t					
reviewing instructions, searching existing data sources, gathering and maintaining the data needed, a collection of information.	nd completing and reviewing the	Interagency Report Control No. 0180-DOA-AN			
		Fiscal year: FY20			
UNITED STATES DEPART	UNITED STATES DEPARTMENT OF AGRICULTURE				
ANIMAL AND PLANT HEA					
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	Explanation	•			
	DR PRINT)				
This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.					
1. REGISTRATION NUMBER	2. Research Facil	lity Headquarters address			
	University of Maryland	, Baltimore F Building, room G100			
51- R- 0018	Baltimore, MD 21201	- Bulluling, room Groo			
3. Number of animals used in the study.	4. Species (comm	non name) of animals used in			
	the study.				
80	Guinea pig				

Animals will be exposed (via oral administration) to lethal doses of chlorpyrifos, which could cause signs of acute toxicity including profuse secretions, respiratory distress, and convulsions. These experiments are necessary to study potential treatments for people who may suffer from the effects of organophosphate intoxicants used as chemical weapons.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Animals that receive supra-lethal doses will receive atropine (standard treatment for organophosphate toxicity) or experimental treatments, but may still experience acute signs of toxicity that may be life-threatening.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	CFR

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According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average .5 hours per response, including the time for 0579-0036. The time required to complete this information collection is estimated to average .5 hours per response, including the time for 0579-0036.		OMB APPROVED 0579-0036		
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collection of information.		Fiscal year:	FY20	
UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE				
Annual Report of Research Facility Column E Explanation				
This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.				
1. REGISTRATION NUMBER 51- R- 0018	2. Research Facil University of Maryland, 10S Pine Street, MSTF Baltimore, MD 21201	, Baltimore		
3. Number of animals used in the study. 18	4. Species (comm the study. Guinea pig	non name) of	f animals used in	

Animals will be exposed to supra-lethal doses of chlorpyrifos, which could cause signs of acute toxicity including profuse secretions, respiratory distress, and convulsions. The conventional antidotal therapy will consist of a muscarinic receptor antagonist (atropine or trihexyphenidyl) and the cholinesterase reactivator pralidoxime (also known as 2-PAM).

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Animals that receive supra-lethal doses will receive of a muscarinic receptor antagonist (atropine or trihexyphenidyl) and the cholinesterase reactivator pralidoxime (also known as 2-PAM but may still experience acute signs of toxicity that may be life-threatening. Animals will be euthanized as soon as signs of acute toxicity become life-threatening,

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	CFR

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Obtained by Rise for Animals Uploaded to Animal Research Laboratory Overview (ARLO) on 05/28/2021

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collection of information.		Fiscal year:	FY20	
UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE				
Annual Report of Research Facility Column E Explanation (TYPE OR PRINT)				
This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.				
1. REGISTRATION NUMBER 51- R- 0018	2. Research Facil University of Maryland, 10S Pine Street, MSTF Baltimore, MD 21201	, Baltimore		
3 Number of animals used in the study.	4. Species (comm the study. Hamster	non name) of	animals used in	

Subsequent to testing efficacy of vaccine candidates in mice, hamsters (the gold standard for Clostridium difficile infection (CDI)) will be used to evaluate vaccine candidates in an effort to develop human therapies for the leading cause of nosocomial antibiotic-associated diarrhea and the etiologic agent of pseudomembranous colitis.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

This protocol will evaluate the efficacy of immune based interventions (vaccine and antibody therapies) against CDI. CDI in hamsters is fulminant and almost always rapidly fatal unless treated. Only new therapeutics that show excellent results in mice will be tested in hamsters. Analgesics cannot be used in this work because they mask clinical signs of disease and alter behavior. Clinical signs such as lethargy, depression and hunched posture are critical for determining severity of disease and alternative endpoints and it will satisfy the need for pre-clinical safety and efficacy data prior to conducting clinical trials in humans.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	CFR	

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UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE				
Annual Report of Research Facility Column E Explanation (TYPE OR PRINT)				
This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.				
1. REGISTRATION NUMBER 51- R- 0018	2. Research Facility Headquarters address University of Maryland, Baltimore 10S Pine Street, MSTF Building, room G100 Baltimore, MD 21201			
3. Number of animals used in the study. 42	4. Species (common name) of animals used in the study. Swine			

Animals may experience unrelieved pain and/or distress due to acute radiation sickness.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Buprenorphine (0.01-0.05mg/kg) will be administered subcutaneously starting one day prior to irradiation and thereafter 2 times daily every 8-12 hours. If breakthrough pain is noted, buprenorphine may be administered up to 3 times daily (TID) every 8-10 hours. Per previous studies, animals respond well to buprenorphine every 8-12 hours will an increase in dose given, if breakthrough pain is observed.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency FDA	CFR CFR Title 21 part 58

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According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a per collection of information unless it displays a valid OMB control number. The valid OMB control number 0579-0036. The time required to complete this information collection is estimated to average .5 hours	per response, including the time for	OMB APPROVED 0579-0036		
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ANIMAL AND PLANT HEALTH INSPECTION SERVICE				
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This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.				
1. REGISTRATION NUMBER		lity Headquarters address		
	University of Maryland, Baltimore 10S Pine Street, MSTF Building, room G100			
51- R- 0018	Baltimore, MD 21201			
3. Number of animals used in the study.	4. Species (common name) of animals used in			
	the study.			
-41	Ferret			

Potentially painful and/or distressful procedures include in vivo electrophysiology and in vivo calcium imaging. Animals are restrained ("point restraint") at the head to a stereotaxic frame. Animals undergo multiple major survival surgeries.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Analgesics (buprenorphine and carprofen), and local anesthetics (marcaine) are administered after major surgeries.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency	CFR	



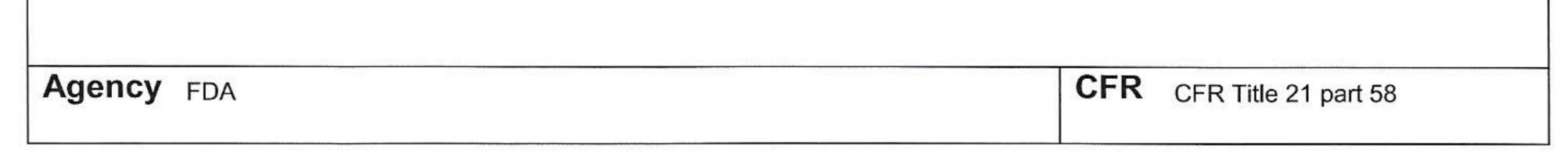
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UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE Annual Report of Research Facility				
Column E Explanation (TYPE OR PRINT)				
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1. REGISTRATION NUMBER 51- R- 0018	2. Research Facility Headquarters address University of Maryland, Baltimore 10S Pine Street, MSTF Building, room G100 Baltimore, MD 21201			
3. Number of animals used in the study. 2	4. Species (comm the study. Rabbit	non name) of animals used in		

Potentially painful and/or distressful procedures include acute radiation syndrome include myelosuppression, multiorgan dysfunction and/or failure that may result in animal pain or distress.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Analgesics (buprenorphine) will be administered when signs of potential pain are observed at any time throughout the study.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):



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