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UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE 1. REGISTRATION NO.

FORM APPROVED

OM6 NO 0579-0036

lered with USDA.

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. ΗΕΑΓ 15-R-0002. Cust ld 266

> (b)(6), (b)(7)(C) RHODE ISLAND HOSPITAL

593 EDDY STREET PROVIDENCE, RI 02903 NOV 1 4 2000

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS (Sites)

Buildings: Middle House 4th & 5th

Aldrich 4th & 5th

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report).	F. TOTAL NO OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	29	0	29
6. Guinea Pigs	0	0	81	0	81
7. Hamsters	0	0	64	0	64
8. Rabbits	0	0	22	0	22
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	188	0	188
12. Other Farm Animals					
13. Other Animals					

- Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2). Each principal investigator has considered alternatives to painful procedures
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL
(Chief Executive Officer or Legally Responsible Institutional Official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTIT

DATE SIGNED

0180 JuA At

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

(TYPE OR PRINT)

1 REGISTRATION NO 15-R-0003

FORM APPROVED OMB NO. 0579 0036

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA include Zip Code)

ANNUAL REPORT OF RESEARCH FACILITY 3 ()

(b)(6), (b)(7)(C) BROWN UNIVERSITY 34 OLIVE ST., BOX G-F287 PROVIDENCE, RI 02912

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching,

FACILITY LOCATIONS (Siles)

Animal Care Facility BioMedical Center

Animal Care FAcility Medical Research Laboratories

Dept. of Psychology

	B. Number of	C Number of		cessary or use APHIS FORM 7023A) E. Number of animals upon which teaching,	_
Animals Covered By The Animal Welfare Regulations	B Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report).	TOTAL NO OF ANIMAL (Cols C D + E)
I. Dogs		2	25		27
5. Cats			33		33
5. Guinea Pigs			0		0
7. Hamsters			0		0
B. Rabbits	3		72		72
9. Non-human Primates			14		14
10. Sheep		5	82		87
II. Pigs			35		35
12. Other Farm Animals					0
Goats			3		3
3. Other Animals					0
Bats	2		2		2

- Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility
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- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of

CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional Official)

Licertify that the above is true, correct, and complete (7.0 S.C. Section 2143)

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

APHIS FORM 7023 (AUG 91)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

(Replaces VS FORM 18-23 (OCT 88), which is obsolete.)

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE 1. REGISTRATION NO.

FORM APPROVED

OMB NO 0579-0036

NOV 14 2000

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEAD(include 15-R-0005. Cust ld 269

MIRIAM HOSPITAL, THE

164 SUMMIT AVENUE PROVIDENCE, RI 02906

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional

FACILITY LOCATIONS (Sites)

A. Animals Covered By The Animal Welfare Regulations	B Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be affached to this report).	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	0	0	0	0	0
13. Other Animals					

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL
(Chief Executive Officer or Legally Responsible Institutional Official)

Licertify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O.

DATE SIGNED

APHIS FORM 7023 (AUG 91)

(Replaces VS FORM 18-23 (OCT 88), which is obsolete.)

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.

15-R-0010

FORM APPROVED OMB NO 0579-0036

2. HEADQUART 15-R-0010, Cust ld 261

with USDA

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

RHODE ISLAND COLLEGE 600 MT. PLEASANT AVENUE PROVIDENCE, RI 02908

HOV 28 3000

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS (Sites)

Site 001: Department of Biology

Fogarty Life Science Building

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report).	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	0	0	0	0	0
13. Other Animals					
Ferrets	2	0	0	0	0

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, freatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility
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- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional Official) Legally Responsible Institutional Official)					
SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL	NAME & TITLE OF CIFIOLOR INSTITUTIONAL OFFICIAL (Type of Print)	DATE SIGNED			
		7.1			

15 Nov 00

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FORM APPROVED OMB NO 0579-0036

ered with USDA

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

Animal Lab

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEAD 15-R-0014, Cust ld 272

1. REGISTRATION NO.

inclua

ETHIDE LABORATORIES, INC. 91 HILL FARM ROAD COVENTRY, RI 02816

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.) FACILITY LOCATIONS (Sites)

REPORT OF ANIMALS USED BY	OR UNDER CONTROL OF	RESEARCH FACILITY	(Attach adiditional sheets if ne	cessary or use APHIS FORM 7023A) '	
A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or lests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report).	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits	3	2			2
9. Non-human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					

ASSURANCE STATEMENTS

13. Other Animals

- Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility
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•	CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL
	(Chief Executive Officer or Legally Responsible Institutional Official)
	Legithy that the above is true correct, and complete (7.11.5.C. Section 2143)

DATE SIGNED

11-8-00

APHIS FORM /U23 (AUG 91)

CONTROL OF A CA OR INSTITUTIONAL OFFICIAL

(Replaces VS FORM 18-23 (OCT 88), which is obsolete.)

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.

FORM APPROVED OMB NO 0579-0036

2. HEADOLIARTERS RESEARCH FACILITY (Name and Address, as registered with USDA incl 15-R-0018, Cust ld 1771

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

DOMANI, INC. 1334 MAIN ROAD TIVERTON, RI 02878

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, tesining, iconing, or opposition)

s. Allach additional

F	ACIL	ITY.	LOCATIONS	(Sites)
---	------	------	-----------	---------

None - Facility Not in use

sheets if necessary.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report).	F. TOTAL NO OF ANIMAL (COIS. C D + E)
4. Dogs					D
5. Cats					0
6. Guinea Pigs		NONE			p
7. Hamsters			FOR		0
8. Rabbits			AL	<u></u>	o
9. Non-human Primates					0
10. Sheep					0
11. Pigs					0
12. Other Farm Animals					0
13. Other Animals					0

- Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL
(Chief Executive Officer or Legally Responsible Institutional Official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

1 REGISTRATION NO. 15-K-0017

CBVORPRE MADE CMB NO 0579,0036,

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USQA

Memogen, Inc.
4 Richmond Square, 4th Floor
Postidence, RI 02906

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.) FACILITY LOCATIONS (Siles)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach adultitional sheets if necessary or use APHIS FORM 7023A) B. Number of E. Number of animals upon which teaching, Number of Number of animals upon animals being animals upon experiments, research, surgery or tests were which experiments. bred. conducted involving accompanying pain or distress **Animals Covered** which leaching, leaching, research, conditioned, or research. to the animals and for which the use of appropriate By The Animal TOTAL NO surgery, or tests were Welfare Regulations held for use in experiments, or anesthetic, analoesic, or tranquilizing drugs would OF ANIMALS conducted involving teaching, testing, have adversely affected the procedures, results, or tests were accompanying pain or experiments. interpretation of the leaching, research, conducted distress to the animals (Cols. C + D + E) research, or on poiviouni experiments, surgery, or tests. (An explanation of and for which appropriate surgery but not the procedures producing pain or distress in these pain, distress, or anesthetic, analgesic, or yet used for such animals and the reasons such drugs were not used use of paintranquilizing drugs were purposes relieving drugs must be attached to this report). used 0 Dogs 0 Cats 0 OGuinea Pigs 0 Hamsters Rabbits Non-human Primates Sheep 11. Pigs 12. Other Farm Animals 13. Other Animals ASSURANCE STATEMENTS

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CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIA	١ı
(Chief Executive Officer or Legally Responsible Institutional Official)	

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

DATE SIGNED

This report is required by law (7 USC 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

See reverse side for additional information Interagency Report Control & 0180-DOA-AN

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO. 15-R-004

FORM APPROVED OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA.

University of Rhode Island Carlotti Administration Bldg. Kingston, RI 02881

M. Beverly Swan, Provost

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheels if necessary.) University of Rhode Island

FACILITY LOCATIONS (Siles)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthatic, analgesic, or tranquilizing drugs were used.	E. Number of animats upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animats and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animats and the reasons such drugs were not used must be attached to this report).	TOTAL NO. OF ANIMAL: (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	30	0	0	30
5. Guinea Pigs	0	0	0	0	0
7. Hamsters	72	265	10	0 .	275
3. Rabbits	0	46	5	33	94
Non-human Primates	0	0	0	0	0
0. Sheep	24	38	1	0	39
I1. Pigs	0	0	2	0	2
12. Other Farm Animals		-		· · · · · · · · · · · · · · · · · · ·	
13. Other Animals					
ite-footed Mice	145	424	0	0	424
Shrews	0	12	0	0	12
Squirrels	0	3	0	0	3

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and tollowing actual research, teaching, testing, surgery, or experimentation were tollowed by this research facility.
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pinniai care pina asc.			
	(Chief Executive Officer or	UARTES RESEARCH FACILITY OFFICIAL Legally Responsible Institutional Official) s, correct, and complete (7 USC Section 2143)	
		NAME & TITLE OF CEALOR INSTITUTIONAL OFFICIAL Time ~ Prints	DATE SIGNED
			11/29/0
	3. in .	Thenlete 1	

See reverse side for additional information.

Interagency Report Control No. 0180-DOA-AN

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO. 15-R-004

FORM APPROVED OMB NO. 0579-0036

CONTINUATION SHEET FOR ANNUAL REPORT
OF RESEARCH FACILITY
(TYPE OR PRINT)

2. HEADOUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA Include Zip Code)

University of Rhode Island

Carlotti Administration Bldg.

Kingston, RI 02881

M. Beverly Swan, Provost

Animals Covered By The Animal Wettere Regulations	8. Number of animals being bred, conditioned, or held for use in reaching, testing, experiments, research, or surgery but not yet used for such	C Number of animals upon which teaching, research, experiments, or lests were conducted involving no pain, distress, or use of pain-	Number of animats upon which experiments, leaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animats and for which appropriate anesthetic, analgestic, or tranquilizing drugs were	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analysisic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used	TOTAL NO. OF ANIMALI (COIS. C + D + E)
(List by species)	ригровав.	relieving drugs.	used.	must be attached to this report).	
Chipmunks	0	41	0	0	41
Voles	0	11	0	0	11
Deer	0	2	8	0	10
Dolphins	0	5	0	0	5
 					

- 1). Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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animal care and use.				
	CERTIFICATION BY HEADQUARTES RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional Official) I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).			
Ī		NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)	DATE SIGNED	
	· 		11/29/0	

Column E Explanation

University of Rhode Island

- 1. Registration Number: 15-R-0004
- 2. Number of animals used in this study: 33
- 3. Species (common name) of animals used in this study: rabbits
- 4. Procedure producing pain and/or distress:

The rabbits are used as a blood source for ticks. The ticks are placed on the rabbits' ears and each ear is individually wrapped with a stocking material. An Elizabethan collar is used to prevent the rabbit from scratching its ears while the ticks are feeding.

5. Scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results:

Due to the potential interference with tick feeding, no analgesics were used to minimize pain or distress. Maintenance of laboratory strains of ticks necessitates the use of vertebrate hosts. In vitro feeding methods have been developed for blood sucking insects such as tsetse flies, mosquitoes, kissing bugs and fleas. However, these arthropods require a blood meal that lasts from just a few seconds to on hour, compared to the tick which remains firmly anchored to the same feeding site for 2-14 days. This considerable investment on the part of the tick is preceded by a stringent cascade for acceptance of an appropriate host and for attachment at a suitable site. The important steps preceding the blood meal of a tick depends on a specific blend of thermal, hydro. mechanical, olfactory and contact chemo stimuli. The tick engorges mainly during the last 24 hours of feeding, with the preceding days allowing for the tick to undergo a variety of physiological changes. All of this renders the tick rather delicate candidates for in vitro feeding, as an adequate diet of blood has to be maintained at the feeding site throughout attachment. Several trials to feed ticks through membranes have been carried out without success. There are currently no alternative methods for tick feeding available.