**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

1. **REGISTRATION NO.**
   - 15-R-0002

2. **FACILITY LOCATIONS (City)**

3. **REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**

<table>
<thead>
<tr>
<th>Animals Covered by the Animal Welfare Regulations</th>
<th>B. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>E. Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress in the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
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<td>0</td>
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<tr>
<td>Cats</td>
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<td>16</td>
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</tr>
<tr>
<td>Sheep</td>
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<tr>
<td>Other Farm Animals</td>
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</tr>
<tr>
<td>Other Animals</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**ASSURANCE STATEMENTS**

1. Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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. The 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 HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Chief Executive Officer or Legally Responsible Institutional Official)

I certify that the above is true, correct, and complete (7 USC Section 2143)

**SIGNATURE OF C**

**DATE SIGNED**

12/11/02

**APHIS FORM 7023**

(Aug 91)

**PART 1 - HEADQUARTERS**

(Replaces VS FORM 18-23 (OCT 88), which is obsolete)
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

**Brown University**
34 Olive St., Box G-F287
Providence, RI 02912
Telephone: (401) 863-3223

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>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 would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.</th>
<th>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 were not used must be attached to</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)</th>
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</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>-</td>
<td>-</td>
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<td>14</td>
</tr>
<tr>
<td>5. Cats</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>-</td>
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</tr>
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<td>8. Rabbits</td>
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<td>9. Non-human Primate</td>
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</tr>
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<td>6</td>
</tr>
<tr>
<td>Bats</td>
<td>23</td>
<td>0</td>
<td>7</td>
<td>-</td>
<td>7</td>
</tr>
</tbody>
</table>

**ASSURANCE STATEMENTS**

1. Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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 health.

**CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Chief Executive Officer or Legally Responsible Institutional Official)

**SIGNATURE**

**NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL**

**DATE SIGNED**

| 1/20/02 |
I
APHIS
ASSURANCE STATEMENTS
REPORT
13. Other Animals
9. Non-Human Primates
8. Rabbits
4. Dogs
7. Hamsters
6. Guinea Pigs
5. Cats
12. Farm Animals
11. Pigs
10. Sheep
12. Other Farm Animals
13. Other Animals

ASSURANCE STATEMENTS
1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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 not used the exceptions to the standards and regulations specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC).
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 HEADQUARTERS 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
10/29/2002

APHIS FORM 7023 (Replaces VS FORM 18-23 (Oct 88), which is obsolete)
This report is required by law (7 USC 2143). Failure to report according to the regulations can result in legal penalties. 

**United States Department of Agriculture**

**Animal and Plant Health Inspection Service**

**Annual Report of Research Facility**

**Ethide Laboratories, Inc.**

91 Hill Farm Road

Coventry, RI 02816

Telephone: (401) - 397-5602

1. Certificate Number: 15-R-0014

Customer Number: 272

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>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</th>
<th>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 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.)</th>
<th>F. Total number of animals (Columns C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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<td></td>
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</tr>
<tr>
<td>5. Cats</td>
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<td>6. Guinea Pigs</td>
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<td>7. Hamsters</td>
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<td>9. Non-human Primate</td>
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<td></td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<tr>
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<tr>
<td>13. Other Animals</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

**Assurance Statements**

1. Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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 practical 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 Headquarters Research Facility Official**

(Chief Executive Officer or Legally Responsible Institutional Official)

<table>
<thead>
<tr>
<th>NAME &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)</th>
<th>DATE SIGNED</th>
</tr>
</thead>
</table>

(Replaces VA Form 10-653 (Oct 86), which is withdrawn.)

(AUG 91)
1. CERTIFICATE NUMBER: 15-R-0018
   CUSTOMER NUMBER: 7771

Domani, Inc.
1334 Main Road
Tiverton, RI 02878
Telephone: (401) -624-3207

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

FACILITY LOCATIONS (Sites) - See Attached Listing

3. REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS Form 7023A)

A. Animals Covered By The Animal Welfare Regulations

B. Number of animals being conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet bred, conditioned, or

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 teaching, research, surgery, or tests were conducted involving no pain, pain-relieving drugs.

E. Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.

F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)

4. Dogs
4a. Dogs

5. Cats
5a. Cats

6. Guinea Pigs
6a. Guinea Pigs

7. Hamsters
7a. Hamsters

8. Rabbits
8a. Rabbits

9. Non-human Primate
9a. Non-human Primate

10. Sheep
10a. Sheep

11. Pigs
11a. Pigs

12. Other Farm Animals
12a. Other Farm Animals

13. Other Animals
13a. Other Animals

ASSURANCE STATEMENTS

1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

DATE SIGNED 12/18/92

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)
### ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**

- **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**
  - **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, tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.**
  - **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, tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.**

#### FACILITY LOCATIONS (Sites)
- **See Attached Listing**

#### ASSURANCE STATEMENTS

1. Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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 alternative 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 animal care facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and

### CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

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

APHIS FORM 7023 (Replaces VS FORM 18-23 (OCT 98), which is obsolete.}

(AUG 91)
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>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, a</th>
<th>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)</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C+D+E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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<td>5. Cats</td>
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<tr>
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</table>

**ASSURANCE STATEMENTS**

1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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

**CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Principal Investigator or Legally Responsible Institutional Official)

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

**DATE SIGNED**

(11/25/02)
CONTINUATION SHEET FOR ANNUAL REPORT
OF RESEARCH FACILITY
(TYPE OR PRINT)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use this form.)

<table>
<thead>
<tr>
<th>A.</th>
<th>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.</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>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.</th>
<th>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.)</th>
<th>F. TOTAL NO. OF ANIMALS (Cols. C + D + E)</th>
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<tbody>
<tr>
<td>Chipmunks</td>
<td>14</td>
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<tr>
<td>Guinea Pigs (Hairless)</td>
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</table>

ASSURANCE STATEMENTS

1. Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate 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 HEADQUARTERS 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)

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

DATE SIGNED

11/25/02
SECTION “E” EXPLANATION

The following explanation is provided for the animals listed in column “E” on APHIS Form 7023 at the University of Rhode Island:

1. Thirty-one New Zealand White rabbits and nine P. leucopus (white-footed mouse) were used for tick feeding. Due to 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 one hour compared top the tick, which remains firmly anchored to the same feeding site for 2-14 days. The important steps preceding the blood meal of a tick depend on a specific blend of thermal, hydro, mechanical, olfactory, and contact chemo stimuli. The tick mainly engorges 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.

2. Thirty-one sheep underwent standard farm animal procedures such as tail docking, castration, and tattooing. One goat also underwent de-horning, and forty chickens underwent de-beaking. It is standard farm practice not to use analgesic or anesthetic agents when carrying out these procedures.

We appreciate the diligent supervision of animal activities by the United States Department of Agriculture. Further, we look forward to a continuing positive working relationship.

Attachment