



INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

Dr. Shanna Ivey, Chair

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Dr. Clint Loest
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Dr. Timothy Wright
Biology

Dr. Colleen Caldwell
Fishery & Wildlife Sciences

Mr. W. Scott Eschenbrenner
Special Assistant to the President

Dr. Erin Ivey Weich.
University Veterinarian

Mr. Trey Miller
Community Member

Dr. JoAnne Dupre, Ex-Officio
Research Integrity and Compliance

Office of the Vice President for
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Anderson Hall, Room E2010
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Dr. Luis A. Cifuentes
Vice President for Research and Dean
of the Graduate School

IACUC Semi-Annual Meeting Spring May 1, 2019

Large Conference Room at Anderson Hall 1:00 PM

Agenda

1. Sign-in Sheet
2. Approval of Minutes from November, 2018 Meeting
3. Protocol Reviews and Process
 - a. Review Checklist
4. Facility Inspections-April 24, 26, and 29, 2019
5. Animal Care Program Review (OLAW Checklist)
6. IACUC Certification for Animal Workers
 - a. Occupational Health and Safety Program for Animal Workers -Update
7. Compliance Status (USDA, OLAW)
 - a. Annual Report to USDA/APHIS
 - b. Annual Report to OLAW
8. Semi-Annual Report to the Institutional Officials (NMSU and Jornada)
9. Other Committee Considerations



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Dr. Shanna Ivey, Chair

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University Veterinarian

Dr. JoAnne Dupre (Ex-Officio)
Research Integrity & Ethics

Dr. Luis A. Cifuentes (Ex-Officio)
Vice President for Research and
Graduate School, Institutional Official
Anderson Hall, Room N2015
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IACUC SEMI-ANNUAL MEETING - SPRING

MAY 1, 2019

ANDERSON HALL LARGE CONFERENCE ROOM

Members Present: Shanna Ivey, Colleen Caldwell, Trey Miller,
Erin Weich, Scott Eschenbrenner, Tim Wright

Absent: Clint Loest

Invitees Present: JoAnne Dupre (ex-officio)

Meeting was called to order by Chair Ivey at 1:10 p.m.

1. Sign-In Sheet: all members are present.
2. Approval of Minutes from November 30, 2018: The motion was made and seconded to accept the minutes as presented. Vote: in favor (6), opposed (0), abstain (0). The minutes were accepted with no modifications.
3. Protocol Reviews and Process
 - Protocol list to date: ten protocols have been approved this year to date, one in progress, and four new protocols were received this week. The majority of protocols are from Fish and Wildlife, followed by Animal and Range Sciences, then Biology. A study on frogs was withdrawn.
 - A recommendation was made to add a column to the protocol list to show the pain category for each protocol.

4. Facility Inspections were conducted on April 24, 26, and 29, 2019. Two or more IACUC members visited each facility to survey the animals, facility conditions, and records.

- Fish, Wildlife, and Conservation Ecology facility: brook trout and fish for the teaching lab were present. Logbooks and notes were organized. No deficiencies. There were no concerns from previous inspection and no recommendations.
- Metabolism and Physiology Facility: protocols, procedures, and logs were up to date for the active protocols. Previous inspection noted a fire extinguisher needed service, a light bulb was needed, and there was a small leak in a faucet; all issues were corrected. IACUC team discussed the large animal table that is unused and difficult to move due to size, and the building's design and age make it difficult to keep clean when protocols are not active. In the northeast animal room, a leak from the roof was discovered during the recent rain. No animals were present in the recovery area or any of the rooms. The sheep metabolism room is used frequently for feed grinding and processing; by the department's rules this is not done when animals are present. Plans are in progress for the new building and future construction that will separate the surgery suites from feed processing and other activities. There was no fire extinguisher in the sheep metabolism room, although there is an exit door. No significant or minor deficiencies. Recommendations were made to put in a work order for the roof leak and that the department continue to follow the standard procedures so that feed processing activities do not affect animal studies.
- Livestock Entomology: no animals were present indoors; inspectors recorded the numbers of cattle in each holding pen outside. Food and water was present and clean, and the appearance of all animals was good. No deficiencies, and no previous inspection findings. A recommendation was made for the PI to update the notebook of training records, to archive old records and make it easier to find the current certificates. It was noted that there is a high turnover of student employees each semester, and the protocols need frequent amendments to report changes in students.
- Animal Care Facility: recommendations were made for organizing the training and safety certificates. In the mouse room, the PI can add a page stating that the researcher's records are located in the biology building where the procedures occur. Rooms with budgies were clean. The vet and PI are monitoring a few birds that had a huddled appearance; it is sporadic in different birds for short times with no apparent cause. In the mice room, the animals appeared healthy, and are housed in the larger cages with accessories, clean food and water. The love birds had food and water present in clean conditions. The vet made recommendations to reduce stress by conducting procedures in a step-wise manner. Other rooms visited by the team were empty, used for storage, or for maintenance. The facility manager is working with Facilities Services to investigate a sewer gas odor in the building. Birds in nearby rooms appeared healthy. Food storage and freezer organization was acceptable. Surgery was clean, with some clutter of equipment and supplies that are not currently

being used. The vet recommended moving excess items such as the stereotactic frame into plastic containers for storage in another room. The disassembled autoclave in the cage wash area should be sent to Property since due to its age it is not cost-effective to connect it there or elsewhere. There were no items from the previous inspection, and no deficiencies. Recommendations: add missing training records or a memo of the location where records are found.

- Jornada: good records; protocols, standard procedures, daily logs, training certifications were available. One cow was at headquarters; all other cattle were on the range. Water tank was filled. Discussion was held on ways to minimize algae, which is unsightly, but not a health concern. Recommend removing old training records, and investigating ways to decrease algae in drinking tanks.
- Foster Hall: the inspection report pages can be updated to remove the inactive room and add a page for the squid room. Recordkeeping was good in the mice study rooms; the standard operating procedure (SOP) pages need to be dated, and the food needs to be marked with an expiration date. The PI requested a copy of the inspection report pages, and the Chair noted that the Research administrator can send these to the facility managers after the meeting. Squid lab personnel need to enroll in the occupational health and safety program. The fish teaching lab had the records in order; no deficiencies or recommendations were made. Overall recommendation: the compliance office can send inspection report to the principal investigators and facility managers after the meeting.
- Horse farm: Four teaching protocols were present; the SOPs, daily logs, IACUC certification and safety training were up-to-date. The team noted the number of horses present and the areas that were viewed. Clean water was present and all horses appeared healthy. Refrigerators were clean, no expired antibiotics or chemicals. No follow-up items from previous inspection. No deficiencies; no recommendations.
- IACUC members noted that the horse farm is inspected by the IACUC at the request of the previous Chancellor. The horse farm and equestrian center are not part of the OLAW Assurance for biomedical research; other areas not covered by the Assurance are the sheep unit and the college ranch. The IACUC can consider adding other areas, although it would be time consuming for the members. It was noted that inspections can help by making recommendations to faculty for uniformity in recordkeeping, and also by bringing attention to areas that need improvement by the department and/or Facilities Services. Once the procedures are established, inspections can be done once per year compared to semiannually for the non-Assurance areas.
- Biology Annex: the electric fish protocol is inactive; goldfish were present. The system is cycling and being prepared for new electric fish. Recommendation was made for updating the protocol and managing records. In the aviary, no birds were present. The area was clean, with a note stating where records are located. There are

no plans to move the budgies back to the outdoor area since the temperature control is better at the Animal Care Facility.

The letters to the Institutional Officials for NMSU and for Jornada will note that no deficiencies were found during inspections. Chair Ivey will send a message to the facility managers to let them know that their efforts are appreciated.

5. Animal Care Program Review (OLAW Checklist)

The committee members reviewed the checklist from U.S. Public Health Service (PHS), Office of Laboratory Animal Welfare (OLAW), which provides an overview of the major topics of the Guide for the Care and Use of Laboratory Animals, 8th Edition, and the requirements of the PHS Policy. After review, no concerns were expressed regarding the animal welfare program and the checklist was signed by the committee members present.

6. IACUC Certification for Animal Workers: no changes

7. Compliance Status (USDA, OLAW)

- The USDA-APHIS annual report for 2018 (Oct 2017-Sept 2018, due December 1 each year) was submitted in November 2018 and accepted. No covered species were reported for last year. Future protocols from new faculty may include bats, which are a covered species, and the facility will need USDA inspection prior to approval. We will contact the USDA regional office to find out if there has been a change in the local inspector.
- The OLAW annual report the change in the Vice President for Research as the Institutional Official, and was acknowledged by OLAW on January 28, 2019.

8. Semi-Annual Report to the Institutional Official (IO)

The semi-annual report to the IO for NMSU campus will be sent to Dr. Luis Cifuentes, and the semi-annual report to the IO for Jornada will be sent to Dr. Brandon Bestelmeyer. Both reports certify that the IACUC met to conduct a review of the animal care and use program and conducted inspections of the animal facilities with no deficiencies. Both reports were approved by the committee as indicated by the signature page.

9. Other Considerations

- Controlled substances: each Principal Investigator will need to obtain their own DEA and state licenses
- Discussion of a BLM-funded project to a researcher who has left NMSU: needs IACUC from the new university, not NMSU IACUC since it does not involve animals at NMSU.

10. Adjourn: The Spring 2019 meeting of the IACUC adjourned at 2:15 p.m.

Minutes reviewed and accepted by the Institutional Animal Care and Use Committee:



Dr. Shanna Ivey, Chair

cc: Dr. Luis A. Cifuentes, Vice President for Research

IACUC Applications 2019

No.	PI	Dept	Anim	Title	Recd	Sent	Act	Date	Length	PHS
001	Summers	ANRS	Cattle	Influence of improved nutrient uptake prior to breeding season	12/08/18	12/10/18	A	01/23/19	1/19 to 1/22	No
002	Boeing	FWCE	Frogs	Withdrawn	-	-	-	-	-	No
003	Estell	Jornada	Cattle	Introduction to rumen ecology	1/19/19	1/24/19	A	2/07/19	2/19 to 1/22	No
004	Duff	ANRS	Cattle	Effects of a pluronic F-68 fog solution on morbidity of newly received calves	1/11/19	1/24/19	A	2/07/19	2/19 to 1/22	No
005	Duff	ANRS	Cattle	Feedlot cattle management Clayton Livestock Research Center	1/19/19	1/24/19	A	2/07/19	2/19 to 1/22	No
006	Roemer	FWCE	Various wildlife	FWCE 355-Wildlife techniques and analysis	1/24/19	2/07/19	A	3/7/19	3/19 to 2/22	No
007	J. Gifford	ANRS	Sheep	Use of accelerometers to detect parturition in pregnant ewes	2/07/19	2/26/19	A	2/26/19	2/19 to 1/22	No
008	Cibils	ANRS	Cattle	Effects of grazing Raramuri Crillo vs. Brangus on CDRRC	2/01/19	2/15/19	A	3/15/19	3/19 to 2/22	No
009	Scholljegerdes	ANRS	Cattle	Effects of dam vaccination status on progeny health	2/07/19	2/26/19	A	2/25/19	2/19 to 1/22	No
010	Scholljegerdes	ANRS	Cattle	Evaluation of PFAS/PFOA contamination and depletion in dairy cattle	3/12/19	3/12/19	A	3/15/19	3/19 to 2/22	No
011	Wright	BIOL								No



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Dr. Luis Cifuentes
Vice President for Research /
Dean of the Graduate School

IACUC Semi-Annual Meeting Fall

November 20, 2019

**Research Administration Services Conference Room
Anderson Hall, Las Cruces, New Mexico**

1:00 PM

Agenda

1. Sign-in Sheet
2. Approval of Minutes from May 1, 2019 Meeting
3. Protocol Reviews and Process
 - a. Review Checklist
4. Facility Inspections-November 13, 15, 18, 20, 2019
5. Animal Care Program Review (OLAW Checklist)
6. IACUC Certification for Animal Workers
 - a. Occupational Health and Safety Program for Animal Workers Update
7. Compliance Status (USDA, OLAW)
 - a. Annual Report to USDA/APHIS
 - b. Annual Report to OLAW
8. Semi-Annual Report to the Institutional Officials (NMSU and Jornada)
9. Other Committee Considerations
 - a. DEA license for Faculty



**INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
SEMI-ANNUAL MEETING
MINUTES OF NOVEMBER 20, 2019
ANDERSON HALL E1014, LAS CRUCES, NM**

IACUC Members:

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Timothy Wright
Biology

Dr. JoAnne Dupre
Ex-Officio
Manager, Biosafety
Research Administration

Dr. Luis A. Cifuentes
Institutional Official
Vice President for Research
and Dean of Graduate School
Anderson Hall, Room N2015
(575) 646-2481

Members Present: Shanna Ivey, Colleen Caldwell, Trey Miller, Clint Loest, Erin Weich, Scott Eschenbrenner, Tim Wright

Present: JoAnne Dupre

The meeting was called to order at 1:03 p.m. by Chair Ivey.

1. Sign-In/Roster: all members are present.
2. Approval of Minutes from May 1, 2019: motion was made and seconded to accept the minutes as presented. Vote: in favor (7), opposed (0), abstain (0). The minutes were accepted with no modifications.
3. Protocol Reviews and Process
Protocols to date: 27 protocols have been approved this year to date, and two more are in review. A couple of unique situations were noted. For Protocol 16, NMSU serves as the IACUC of record for wildlife surveillance by researchers at Eastern NM University; since the funding is through the NIH-INBRE program at NMSU, ENMU is not eligible for an OLAW Assurance. For Protocol 17, a wildlife study on BLM land in NM, the PI has moved to Colorado State (CSU), but the project funding and personnel payments remains with NMSU. The CSU-IACUC approved the protocol, and then the NMSU-IACUC reviewed and accepted the CSU approval for the protocol which finishes this year.

Most of the reviewed protocols are from the departments of Fish and Wildlife, Animal and Range Sciences, and Biology. We've seen several unique protocols from one PI for Extension wildlife surveys on White Sands rangeland. The PI for those studies is very experienced and efficient in handling

the large mammals and has provided written responses about the techniques and safety of the procedures.

Discussion was held on the protocol review process, and the use of designated member review (DMR) according to the approved process in the OLAW Assurance. Many institutions meet monthly for full committee review; at NMSU, most of the protocols we see are appropriate for DMR, and all committee members participate as designated reviewers.

4. Animal Care Program Review (OLAW Checklist): The committee members reviewed the checklist from U.S. Public Health Service (PHS), Office of Laboratory Animal Welfare (OLAW), which provides an overview of the major topics of the Guide for the Care and Use of Laboratory Animals, 8th Edition, and the requirements of the PHS Policy. After review, no concerns were expressed regarding the animal welfare program and the checklist was signed by the committee members present.
5. Facility Inspections were conducted on November 13, 15, 18, and 20, 2019.

Members commented that the NMSU facilities group (F&S) has been responsive to improve animal care areas upon requests. While a representative from F&S is not available to attend meetings or inspections, the F&S group is attentive to memos from IACUC. In addition, member Eschenbrenner can act as a liaison to the F&S administration for issues since he meets with them every two weeks. Motion was made and seconded to accept Scott's role as liaison to F&S. Vote by voice; in favor, unanimous. The Chair will develop details for these communications.

Inspections: two or more IACUC members visited each facility to survey the animals, facility conditions, and records.

- Horse Farm: Four active protocols, all for teaching, with the PI as the only one listed on the protocols. Training certificates were current for the PI's IACUC certification, and all other employees that care for the animals are enrolled in the occupational health and safety program. It was noted that training certificates can be difficult to access for the supervisor, and the website instructions will be reviewed for CITI program and for Training Central. Animals were healthy, and numbers have been reduced according to the program needs. No prior corrections were needed. No current deficiencies.
- Animal and Range Science Metabolism: one active protocol, and one completed protocol. Recommendation was made for the PI to organize training records in the on-site binder. The PI requested a copy of the inspection report. The facility was in good shape, except for expired fire extinguishers. The feed processing area is locked so it is not used during animal studies, and the expectation is that the grinders will be moved to new feed mill facilities in the future. Recommendations: ensure fire extinguishers are updated; check surgery supplies once per year and remove expired supplies. No deficiencies.
- Livestock Entomology: records for protocols and training are maintained. An issue was noted with water pressure in the main building, and recent frequent pump replacements. There are plans for water tank replacement; in the meantime, the

IACUC will follow up with Facilities to ensure they are aware and can address pump issues. Animals in pens appeared healthy. No deficiencies.

- Animal Care Facility: Each room had all records up to date. Animals (birds) appeared healthy. There is some issue with the smell from the drains, at times, which can be helped by pouring Simple Green into the drain. Committee members recommended removing the old unused autoclave for space considerations.
 - In answer to a question from the facility manager, animal care records are to be maintained physically (hard copies) for three years, after which they can be scanned and kept electronically in Cloud storage if needed.
 - The Chair discussed a recent request for records from the New England Anti-Vivisection Society, for which we had no responsive records. We may see more requests in the future whenever there is news about the new vivarium facilities, and it is a good reminder that such requests need to go through University General Counsel to assist with the response.
- Fish, Wildlife, and Conservation Ecology facility: three active protocols (two field and one indoors). Brook trout in the tanks were active, and fish in other tanks appeared healthy. Clarifications were made for updating personnel records.
 - In answer to a question about personnel who have completed animal work, they should remain on the protocol and the PI can include a memo in the training logbook noting the date that animal contact ended.
- Biology Annex: Fish protocol, records were up to date. All looked good. The PI noted that she requested an addition of electrical outlets, but Facilities has not completed it. The effort will be restarted now that new personnel are in place in the Biology department.
 - Aviary: no birds are present.
- Foster Hall: records are up to date.
 - Teaching lab fish tanks: clean; records were present. PI can contact the IACUC Chair to discuss amending the protocol to replace commonly available fish species. Adding more than 20% in number or a significant change in species will require a new protocol.
 - Mice: appeared healthy. Some discussion was held about the economics of maintaining a breeding colony of mice at the Animal Care Facility or purchasing per use which can sometimes have delayed shipping. The ACF manager has maintained colonies in the past, and it is an option for the future.
 - Squid: daily logs, protocol and standard procedures were present; recommendation for removing records of past personnel.
- Jornada Range: one teaching protocol, and procedure for cattle breeding operation. Records were excellent, for daily inspections (half of the cattle pastures every day) and for personnel training. Pharmacy, refrigerated supplies, and feed room were clean and organized. Water tanks were clean, with no algae, which had been noted on a previous inspection. Cattle and horses at headquarters appeared healthy. Numbers of all livestock was recorded.

6. IACUC Certification for Animal Workers: the number of attendees to the in-person safety class is down from one year ago, and more personnel are requesting to complete the online training and occupational health enrollment process. In the past, it was required for most on-campus personnel to complete the in-person class initially in order to complete the risk

assessment and authorizations for health services. This is not a written requirement, and improved communications between Aggie Health, Research Compliance, and the Principal Investigators have made the online completion a good option. Aggie Health can record immunizations for both students and employees. Trainees are required to contact the Biosafety Manager to complete the records for CITI training and immunization/health clearance.

7. Compliance Status (USDA, OLAW)

- The USDA-APHIS annual report for Oct 2018-Sept 2019 is due December 1 and will be submitted next week showing we have no covered species. Livestock, rodents, birds, and fish are not “covered species” for the APHIS report, unless: livestock used for biomedical research, or we house wild animals for more than 12 hours.
- The OLAW annual report is due in the spring.
- The OLAW Assurance draft is due at the end of March.

8. Semi-Annual Report to the Institutional Official (IO): The semi-annual report to the IO for NMSU campus will be sent to Dr. Luis Cifuentes, and the semi-annual report to the IO for Jornada will be sent to Dr. Brandon Bestelmeyer. Both reports certify that the IACUC met to conduct a review of the animal care and use program and conducted inspections of the animal facilities with no deficiencies observed and no minority views expressed. Both reports were approved by the committee and this will be indicated by members’ signatures on the last page of the reports.

9. Other Considerations

- Controlled substances/DEA licenses policy: the Chair is reviewing policies from other universities, and will seek guidance from the VP for Research about bringing this to the University Administrative Council as a Regents Policy. Need to review the work we did in the past and reach out to General Council. The DEA inspector can be contacted for guidance to individual PIs, and/or for the vet to have the ability to maintain control for NMSU animals. Each location (address) where controlled substances are kept must have a separate license/storage. Controlled substance policies for animal research should be separate from other types of research (e.g., human subject, biomedical lab studies).

10. Adjourn: The Fall 2019 meeting of the IACUC adjourned at 2:15 p.m.

These minutes constitute the record of the meeting on November 20, 2019 and distributed for comments, additions, and corrections to all members with revisions incorporated.

Shanna Ivey, Ph.D.
Chair, Institutional Animal Care and Use Committee
New Mexico State University

cc: Dr. Luis A. Cifuentes
Vice President for Research/Dean, Graduate School

IACUC Members

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Colleen Caldwell	Fishery & Wildlife Sciences
Scott Eschenbrenner	Special Assistant to the President
Clint Loest	Animal & Range Sciences
Trey Miller	Community Member
Erin Weich	University Veterinarian
Timothy Wright	Biology
JoAnne Dupre	Ex-Officio, Research Administration
Luis A. Cifuentes	Institutional Official, Vice President for Research/Dean

IACUC Applications 2019

No.	PI	Dept	Anim	Title	Recd	Sent	Act	Date	Length	PHS
001	Summers	ANRS	Cattle	Influence of improved nutrient uptake prior to breeding season	12/08/18	12/10/18	A	01/23/19	1/19 to 1/22	No
002	Boeing	FWCE	Frogs	Withdrawn	-	-	-	-	-	No
003	Estell	Jornada	Cattle	Introduction to rumen ecology	1/19/19	1/24/19	A	2/07/19	2/19 to 1/22	No
004	Duff	ANRS	Cattle	Effects of a pluronic F-68 fog solution on morbidity of newly received calves	1/11/19	1/24/19	A	2/07/19	2/19 to 1/22	No
005	Duff	ANRS	Cattle	Feedlot cattle management Clayton Livestock Research Center	1/19/19	1/24/19	A	2/07/19	2/19 to 1/22	No
006	Roemer	FWCE	Various wildlife	FWCE 355-Wildlife techniques and analysis	1/24/19	2/07/19	A	3/7/19	3/19 to 2/22	No
007	J. Gifford	ANRS	Sheep	Use of accelerometers to detect parturition in pregnant ewes	2/07/19	2/26/19	A	2/26/19	2/19 to 1/22	No
008	Cibils	ANRS	Cattle	Effects of grazing Raramuri Crillo vs. Brangus on CDRRC	2/01/19	2/15/19	A	3/15/19	3/19 to 2/22	No
009	Scholljegerdes	ANRS	Cattle	Effects of dam vaccination status on progeny health	2/07/19	2/26/19	A	2/25/19	2/19 to 1/22	No
010	Scholljegerdes	ANRS	Cattle	Evaluation of PFAS/PFOA contamination and depletion in dairy cattle	3/12/19	3/12/19	A	3/15/19	3/19 to 2/22	No
011	Wright	BIOL	Birds	Effects of chronic stress on adult vocal learning, social integration, and DNA methylation	3/28/19	4/5/19	A	5/2/19	5/19 to 4/22	No
012	Cibils	ANRS	Cattle	Deployment of animal wearable sensors	4/27/19	5/2/19	A	5/23/19	5/19 to 4/22	No

No.	PI	Dept	Anim	Title	Recd	Sent	Act	Date	Length	PHS
013	Duff	ANRS	Cattle	Evaluation of criollo genetics	4/27/19	5/2/19	A	5/23/19	5/19 to 4/22	No
014	Unguez	BIOL	Fish	Demonstrations of electrosensory behavior of electric fishes	6/01/19	6/05/19	A	6/23/19	6/19 to 5/22	No
015	Unguez	BIOL	Fish	Characterization of neural-dependent effects on extreme muscle plasticity and regeneration in electric fish	6/01/19	6/05/19	A	6/23/19	6/19 to 5/22	No
016	Mali	ENMU	Rodent	Hantavirus seroprevalence and genetic confirmation of hantaviruses in NM rodent assemblages	6/28/19	7/12/19	A	8/7/19	8/19 to 7/22	No
017	Stoner	CSU	Bats	Nectarivorous bats northern boundary	6/28/19	7/12/19	A	8/7/19	8/19 to 7/22	No
018	Bender	EASNR	Mega-Carnivore	Natural resources conservation on White Sands Missile Range (Megacarnivore subproject)	8/02/19	8/06/19	A	8/29/19	8/19 to 7/22	No
019	Bender	EASNR	Coyote – bobcat	Natural resources conservation on White Sands Missile Range (coyote/bobcat subproject)	8/02/19	8/06/19	A	8/29/19	8/19 to 7/22	No
020	Soto	ANRS	Cattle	Effect of monensin source on ruminal fermentation	8/02/19	8/06/19	A	8/29/19	8/19 to 7/22	No
021	Bailey	ANRS	Cattle	Use of accelerometers and GPS tracking to monitor cattle behavior and welfare	8/06/19	8/07/19	A	8/29/19	8/19 to 7/22	No

No.	PI	Dept	Anim	Title	Recd	Sent	Act	Date	Length	PHS
022	Ward	EASNR	Cattle	Feed and water intake of purebred cattle	8/06/19	8/29/19	A	10/17/19	10/19 to 9/22	No
023	Desmond	FWCE	Wildlife	FCWE 110: Introduction to natural resources	9/09/19	9/19/19	A	10/22/19	10/19 to 9/22	No
024	Lauriault	PES	Cattle	Discovering, developing, and delivering forage management solutions to meet changes in NM ag	09/12/19	09/19/19	A	10/22/19	10/19 to 9/22	No
025	Duff	ANRS	Cattle	Magnesium source on serum and urinary magnesium in growing calves	10/02/19	10/17/19	A	11/14/19	11/19 to 10/22	No
026	Duff	ANRS	Cattle	Effects of terminal implant dose and endpoint on growth and carcass characteristics on finishing steers	10/02/19	10/17/19	A	11/14/19	11/19 to 10/22	No
027	Summers	ANRS	Cattle	Influence of in utero precipitation level on ovarian histology and follicle microenvironment	10/22/19	10/28/19	A	11/14/19	11/19 to 10/22	No
028	Estell	Jornada	Cattle	Demonstration: deployment of animal wearable sensors	10/21	11/14				No
029	Bender	EASNR	Elk	Movements of adult bull elk in a wildlife enterprise/ranch management context	11/13/19	11/14/19				No