

*North Central – Dr. Ronald W. Griffith*

**Goat CIDR-G Milk Residue**

Study report accepted. We received word from Dorothy Bailey that our requested zero-day withholding time for milk has been approved. This will allow us to complete the efficacy study for milk goats.

**Goat CIDR-G Tissue Residue**

Sixteen meat-type does were purchased and CIDRs placed in 8 does on October 24, 2009. The CIDRs were removed on November 11 and muscle and fat tissues harvested according to protocol (just less than 12 hr. following CIDR removal). The reproductive tracts were removed and examined by a board certified theriogenologist. The tissue analytical work was performed within two weeks by Dr. Dennis Hallford at NMSU. P4 in goat muscle and fat tissues is stable to multiple freeze-thaw cycles as expected. The tissue levels of progesterone 12 hr. following removal of the CIDRs were significantly below progesterone levels in tissues of does with intact corpora lutea that did not receive the CIDRs. The study report is being prepared.

**Goat CIDR-G Effectiveness**

The NC and Western Regions are cooperating on this study. The Western Region conducted a study in dairy goats with the U.C. Davis herd. The NC region (Iowa State) used a herd of 54 meat-type does for their study. In Iowa, the CIDRs were placed on October 9, 2009 and were removed on October 27, 2009. Estrus synchronization occurred in 90 plus percent of the does and pregnancy rates were very good on ultrasound. The owners will be following this group through to kidding as part of reproductive safety.

Contacts have been made for placing CIDRs in at least three dairy goat herds in Wisconsin and hopefully an equal number in North Carolina during the fall 2010 breeding season. We also have investigators willing to cooperate in Tennessee and Texas. We have one other group of meat goats lined up for next fall in Iowa and need to find at least one more herd. Our targets are 6 herds of approximately 60 does each in at least two different geographic areas of the U.S. We need to do 6 herds for dairy goats and 6 herds for meat goats. Our target for submission of the completed study report is spring or summer 2011.

**Lasalocid in Pheasants Efficacy**

The study was completed in 2007 and the study report QA'd by Sandy Ogletree several months ago. The study director has recently responded to a request to submit the study report and it will hopefully be submitted soon.

**Lasalocid in Pheasants TAS**

The study was completed the first week of August, 2009. The study report has been written except for the section dealing with the statistical analysis. The student involved promised to work on this over the Christmas break and Spring break but did not. There were no adverse effects noted when lasalocid was fed at 1X, 2X and 3X the highest recommended dose for chickens and turkeys. These levels of lasalocid were fed for 6 weeks.

**Bioclip in Sheep**

No report. Too many projects at the moment to devote any time to this.

**Draxxin (tulathromycin) Target Animal Safety in Goats**

The study report has been submitted to the FDA/CVM. We hopefully will hear back in July or August, 2010. Dr. Kris Clothier has a manuscript accepted by the Journal of Pharmacology and Therapeutics.

**Draxxin (tulathromycin) Tissue Residue**

Thirty-three male/castrated male goats were obtained from local producers in July 2009. We experienced some death loss and had to initiate treatment for coccidiosis in a few of the dairy breed goats and for *Haemonchus contortus* in a few of the meat breed goats. As a result, we needed to conduct and justify an extended "washout" period and replace 4 of 5 goats that died. Tissues were collected at 1, 5, 11, 18, 25 and 48 days post treatment. The methods for tissue extraction and tulathromycin analysis have been validated and the tissues were shipped to the analytical lab at U.C. Davis. Processing and analysis of the tissues is underway.

**Draxxin (tulathromycin) Efficacy in Goats**

A protocol based upon determination of AUC/MIC was prepared and submitted. It was decided that we needed some preliminary pharmacokinetic and MIC data in order to set a realistic target. We have procured sufficient isolates of *Mannheimia haemolytica* (over 30) but only about 14 isolates of *Pasteurella multocida*. MIC's have been determined on all of these. We have performed a larger pharmacokinetic study (using the 25- and 48-day goats of the HFS study above). Plasma samples were collected from these 10 goats with much earlier and more frequent sampling times. The analytical lab at U.C. Davis has completed analysis of the plasma samples. This study is the subject of a requested pre-submission conference.

*Southern – Dr. Thomas Vickroy*  
**Projects in Progress**

**RABBITS**

ADR – 0107 Ivermectin & Rabbits

The human safety and target animal safety reports are being prepared subject to completion of freezer stability. This task was treated as secondary to the fenbendazole in game birds but is now being pushed to completion.

**BIRDS**

ADR - 0280 Fenbendazole & Game birds

The human safety report was submitted to FDA-CVM. The concerns of UC-Davis QA resulted in (a) withdrawal of quail part of the report [QA problem with Webb's dual role as study director and QA inspector plus very problematic withdrawal conclusions]; (b) letters from site personnel were submitted to try and mitigate lack of in vivo QA inspection; (c) in vitro section QA was certified by UCD. We have just heard that the pheasant study has been rejected but we have no information of why or whether there is any possibility of re-submission. The TAS report is now complete but lacks investigator's final input and QA we are planning a 60-day completion. We are very concerned with the GLP QA aspect as it has some of the same problems as the rejected HFS submission.

**SMALL RUMINANTS**

ADR – 0210 Fenbendazole & Red Deer & ADR – 0216 Fenbendazole & Fallow Deer. Intervet / Schering Plough/Pfizer are still working on their combined project pipeline priorities so this project is on hold. Dose seems a critical point to be solved.

ADR - 0294 Lasalocid and Deer / ADR - 0298 Lasalocid and Goats

Problem is that Alpharma will only proceed if there is a zero withdrawal time. We have had problems with the assay and hope to gain guidance from CVM at this meeting. The problem is the established method is non-reproducible so validating/bridging of the assay is problematic. Alpharma seem reluctant to file for designation that would eliminate applying for the FDA competitive funds to work on an acceptable assay. Also we have not submitted a protocol for the HFS study in either goats or deer. See below for Texas A&M University collaboration.

We have exchanged drafts of the HFS protocol for lasalocid in goats with Dr Fajt [Texas A&M University]. It has not been readied for submission to FDA. Texas A&M University is developing a drug development program and will probably have it's own QA unit.

**BEES**

ADR – 0343 Remebee and Honey bees

The Remebee project is with Beeologics for an Israel Acute Paralysis Virus [IAPV] specific double strand RNA product for prevention of collapsing colony disorder. The company has obtained an INAD and following a teleconference with FDA/CVM last month, has gained both EA exclusion and approval for consumption of honey from treated hives (treatment has to end before honey flow). NRSP-7's role is of a possible advisor until FDA considers all the data submitted to determine what gaps there are and how large.

**Work Planned for the remainder of the Year:**

- Maintain lab and staff at GLP level.
- Continue efforts for collaborative studies for gaining approval of fenbendazole & lasalocid in deer, and lasalocid in goats.
- Prepare, in coordination with the National Coordinator, INAD submissions for studies conducted under the aegis of the Southern Region. Initial preparation of written responses to CVM review of all of the data submitted for each project. This is often a time consuming and unrecognized activity associated with the completion of each project and may require considerable correspondence and conversation.
- Continued collaborative work with the other regions is anticipated and may include unplanned studies to address critical needs and opportunities to collect data.
- Continue the development of the MUADP/NRSP-7 web site with possible re-implementation of the RUSTi database.

**New / Proposed Projects:**

Currently, the primary effort is to complete existing studies and we are trying to collaborate with Texas A&M University to start work on lasalocid deer and goat projects.

**Web Site**

The NRSP-7.org web has continued to function well but is need of some development such as PowerPoint Presentations. The University is increasing security and is centralizing control of IT. We are concerned but we have been model citizens plus we actually got our original permission to host the web site without obvious use of the ufl.edu domain from the current head of IT. The MUMSRx web database continues to be updated – it alone receives 1-2 hits each day. RUSTi is alive but with loss of biological scientist we have kept a low profile. Further development will have to wait upon program's choice of a successor for the current coordinator. However we would like

some discussion and guidance on off-site housing of the web site and records of minutes, reports, and current as well as past project documents.

#### REPORTS FROM LIAISONS

##### *NIFA/USDA – Dr. Gary Sherman*

Dr. Gary Sherman continued his discussion from fall 2009 on the funding methods of the program and the complexities of the budget process. As personnel changes continue to occur at the agency, he also described the latest organizational changes at NIFA/USDA. This includes the recent changes at the USDA Cooperative State Research, Education, and Extension Service (CSREES).

Next in his presentation, Dr. Sherman emphasized the need for MUADP/NRSP-7 to recognize the new Research, Education, and Economics (REE) priorities of NIFA and to stress the role of MUADP in specific priority areas. He reiterated the REE priorities as

- Global Food Security and Hunger
- Climate Change
- Sustainable Energy
- Childhood Obesity
- Food Safety

During the presentation, it was discussed how MUADP/NRSP-7 can be of great value in the areas of food security and food safety.

As in the 2009 fall meeting, a good deal of discussion centered on the goal of changing NRSP-7 from a congressionally directed line item to a program with its own authority. NRSPs are a type of program funded through the Agricultural Experiment Stations of State Universities using Hatch funds. With its own authority, the “Minor Use Animal Drug Program” would be funded through a special grant. The hope is that funding would be more reliable and based on goals and needs that differ from the other NRSPs. The name Minor Use Animal Drug Program is the one currently used in the federal budget to describe NRSP-7, and the committee has decided to use that name.

A vote taken by the Technical Committee following this discussion of the MUADP funding category was unanimous to have Dr. Sherman work in concert with the Technical Committee to move the program’s current status from noncompetitive to competitive within NIFA/USDA. It was felt that this move would be necessary to support increased funding and maintain viability in the current political climate that discourages Congressional “earmarks”.

##### *Report from CVM – Dr. Meg Oeller*

Dr. Oeller began her presentation with a short review of the active projects in each of the regions and discussed any issues regarding these projects with the respective Regional Coordinator. In summary those active projects discussed included:

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Spring 2010

ADR	DRUG	FORMULATION	SPECIES	INDICATION	FIRM	REGION	INAD
135	Erythromycin	Premix	Salmonids	Bacterial kidney disease	Bimeda	W	6013
325	Florfenicol	Injectable	Sheep	Respiratory infections	Schering	W	10-958
311	Lincomycin	Powder	Honey bees	American Foulbrood	Pfizer	W	10-776
299	Pirlimycin	Intramammary	Goats	Mastitis	Pfizer	W	Pending
295	Strontium Chloride	Immersion	Fish	Otolith marking	Western Chemical	W	10-536
216	Fenbendazole	Premix	Deer	Gastrointestinal parasites	Intervet	S	10-993
280	Fenbendazole	Premix	Pheasants & partridges	Gapeworm & capillaria	Intervet	S	10-062
107	Ivermectin	Injectable	Rabbits	Ear mites	Merial	S	9557
294	Lasalocid	Premix	Deer	Coccidiosis	Alpharma	S	10-746
298	Lasalocid	Premix	Goats	Coccidiosis	Alpharma	S	10-872
343	Remebee™	Oral liquid	Honey Bees	Israeli Acute Paralysis Virus	Beeologics	S	MUMS
334	Florfenicol	Oral	Fish (Finfish)	Bacterial infection	Schering	NE	11-145
285	Oxytetracycline	Feed	Fish(Various)	Vibriosis	Phibro	NE	10-320
313	Sulfadimethoxine & ormetoprim	Premix	Fish	Bacterial infections	Alpharma	NE	10-823
272	Sulfadimethoxine & ormetoprim	Premix	Pheasants	Bacterial infections	Alpharma	NE	10-804
324	Progesterone	CIDR	Goats	Estrus Synchronization	Pfizer	NC/W	11-389
235	Lasalocid	Premix	Pheasants	Coccidiosis	Alpharma	NC	9096
340	Tulathromycin	Injectable	Goats	Respiratory infection	Pfizer	NC	11-512
339	Tulathromycin	Injectable	Sheep	Respiratory Infection	Pfizer	NC	11-513

Following the review of regional projects, Dr. Oeller provided an update on INADs to be terminated. A list of ADUFA (Animal Drug User Fee Act of 2003) waiver requests was given to the attendees. The INADs were divided into three categories: (1) INADs behind approvals were archived, (2) INADs for active projects were maintained, and (3) INADs for abandoned projects were terminated.

Dr. Oeller placed into discussion two potential project questions – banamine (flunixin meglumine) for sheep and goats, and a request from the American Sheep Industry Association’s Paul Rodgers for a new sheep dip dewormer Zolvix.

Website issues discussed included (1) the need to update the FAQ section, (2) inclusion of a project list with status updates, (3) should RUSTI be public, and (4) an update of links to FDA/CVM, stakeholder associations and NIFA/USDA.

Finally, Dr. Oeller led a discussion on the usefulness of a protocol archive on RUSTI and encouraging designation status by sponsors. Both ideas were strongly supported by attendees. She concluded her presentation with the introduction of the likelihood of a new FDA/CVM liaison replacing her due to the dramatic increase in her responsibilities at OMUMS. The timeline for this change has not been developed, but is coming.

**12:00 – 1:00 Lunch**

*Discussion of protocols and submission requirements with reviewers from CVM*

The Regional Coordinators presented quick overviews of their on-going projects and then joined the CVM reviewers in a very helpful discussion of currently available guidance documents, the format of submissions for review, protocol development, and various problems with the use and validation of regulatory methods. The committee truly appreciates the time and assistance provided by the reviewers.

**FRIDAY NOVEMBER 20<sup>TH</sup>, 2009 EXECUTIVE WORKING SESSION**

The USDA's Minor Species Animal Drug Program, National Research Support Project #7 (NRSP-7) held its second day of the spring semi-annual meeting of the technical committee and administrative advisors at the FDA Center for Veterinary Medicine (CVM), 7519 Standish Place, Rockville, MD.

MEETING ATTENDEES

NAME	AFFILIATION	EMAIL ADDRESS
Dorothy Bailey	FDA/CVM	dorothy.bailey@fda.hhs.gov.
Gary Sherman	USDA/CSRESS	gsherman@nifa.usda.gov
John Babish	NRSP-7	jgb7@cornell.edu
John C. Baker	AA/MI AES	Baker@anr.msu.edu
Lisa Tell	NRSP-7/UC Davis	latell@ucdavis.edu
Margaret Smith	AA/Cornell University	mes25@cornell.edu
Meg Oeller	FDA/CVM	moeller@cvm.fda.gov
Paul Bowser	NRSP-7/Cornell	prb4@cornell.edu
Ron Griffith	NRSP-7/Iowa State	rgriffit@iastate.edu
Thomas Vickroy	NRSP-7/U FL	vickroy@vetmed.ufl.edu

ADMINISTRATIVE REPORTS

REPORT FROM THE ADMINISTRATIVE ADVISORS - Dr. John Baker (Chair)

Dr. Baker began his report with a reminder to the Regional Coordinators to go to the NIMSS (National Information Management and Support System) site and complete the Appendix E forms required of participants of AES programs. The Appendix E form is critical for the estimation of FTE dedicated to each program.

In discussing the appointment of Dr. Bret Hess as the new Administrative Advisor for the Western Region, Dr. Baker noted the diligence with which the Western AES group acted upon this appointment.

Dr. Baker praised the Regional Coordinators for all of their efforts to increase the program funding and to put the program on a more stable funding situation. Among those issues to continue pursuing, he listed movement into an IR-4 like competitive grants program at NIFA and the development of an action plan roadmap to carry out this objective.

In conclusion, Dr. Baker stressed the need to develop a broader listing of stakeholder groups to align with additional NIFA priorities of sustainable agriculture and support of the rural, family farms.

REPORT FROM THE NATIONAL COORDINATOR – Dr. John G. Babish

*Proposed changes to the program*

Some personnel changes have occurred. Dr. Thomas Vickroy of the University of Florida, who is in attendance, will be assuming the position of Regional Coordinator for the Southern Region. Also, Dr. John Baker has assumed the position of Chair of the Administrative Advisors.

Dr. Bret W. Hess, Associate Dean and Director AES, University of Wyoming (brethess@uwyo.ed) has replaced Dr. David Thawley as Administrative Advisor in the Western Region. Dr. Hess' research efforts have focused on nutritional management strategies to improve production efficiency of forage-fed ruminant animals, with primary emphasis on strategic supplementation regimes and secondary interest in alternative forages. This change has been made in concert with the appointment of Dr. Zhanjiang

(John) Liu, Alumni Professor and Director, Department of Fisheries and Allied Aquacultures and Program of Cell and Molecular Biosciences, and Director, Aquatic Genomics Unit, Auburn University, as the Administrative Advisor for the Southern Region replacing Dr. Garry Adams.

#### ACTION ITEMS DISCUSSED

##### FENBENDAZOLE IN PHEASANTS

Need to get product development meeting scheduled.

1. Tom and Lisa to look at Target Animal Safety (TAS) data and make sure that there were not any problems with the pheasants.
2. Tom and Lisa to look at TAS protocol and see what should be asked as an exclusion for the next TAS study during product development meeting. If we need to do the TAS study (and it is not to our advantage to wait for the PD meeting, then we could try to do this part of the study this summer). We could essentially do it the same as the lasalocid TAS study. I know this is not ideal but Ron can comment on whether or not he has money he needs to spend regardless so minimizing what we do might not necessarily be necessary if it gets this part of the study done and allows us to get tissues to plan for the HFS and efficacy study the next summer. We would essentially be doing the fenbendazole study without protocol concurrence but would be modeling the study after the lasalocid TAS that had protocol concurrence. A worst-case scenario is that we will have more data than less.
3. Product Development meeting: Ask for efficacy data to be admissible; touch base about partial method validation.
4. Meg/Dorothy: Get data from current INAD to support efficacy and discuss efficacy study with McFarlan about efficacy
5. UC Davis to get assay up and running during 2010. Product development meeting ask if method validation is still acceptable.
6. Ron G.: Get samples during summer of 2010 for Davis to work with
7. Tom V.: Check with Brett Herrig ([brent.herrig@sp.intervet.com](mailto:brent.herrig@sp.intervet.com)) about designation? Not sure if this use has been formally designated at CVM.
8. Tom V. (Southern Region): Target this summer for submission of protocols (HFS for sure; do we do TAS this summer without protocol concurrence)?
9. Potential study to apply for Minor Use Minor Species grant
10. Summer 2011: Studies for Human Food Safety and Efficacy.

##### LASALOCID IN GAME BIRDS

1. U of F: Generate questions relative to the fact that the columns can no longer be purchased for the "official method"
2. Meg: Request a conference call with CVM
3. Note: Lisa Tell and Scott Wetzlich would like to attend conference call also
4. Ron: TAS technical support will be submitted
5. Ron: What happened to samples for TAS (1x, 3x and 5x?)
6. Efficacy: Georgia investigators are writing technical report. Report has been written and QAed, but investigators need to respond to QA issues. This may be a good one for having a pre-submission conference call with CVM due to some QA issues.
7. HFS: Still waiting for assay to be validated.

TULTHROMYCIN IN GOATS:

1. TAS submitted to CVM by Kris Clothier/Ron Griffith.
2. Efficacy: Lisa to do literature search regarding plasma and lung secretions correlations
3. Efficacy: Marilyn to get information to us regarding Office of Research studies
4. Efficacy: Tom to send information about diffusion method
5. Efficacy: Lisa to do PK modeling of serum data for Kris to provide new AUC's for data that was generated with rerun of diluted samples
6. Ron and Kris: Work on isolate information. MIC/AUC needs to be substantiated with kill kinetics (5 isolates)
7. HFS: Western region to get method validation written
8. HFS: Western region to finish tissue data analysis and gather data and send it to ISU
9. Lisa to follow up with Albert about designation
10. Doc 152: Dorothy or Meg to start working on FOI Summary

CIDRS GOAT AND DEER

1. Western region to send goat data from Fall 2009 to ISU. ISU grad student who is doing HFS (meat) report will also work on compilation of efficacy data.
2. Goat HFS: To be submitted by ISU (grad student working on it currently). NOTE TO RON: Need to submit an interpretation/summary of the method validation from Dennis. Even though he gives all of the information for meat method validation, he needs to give them a summary of what was done and what it meant.
3. Both UC Davis and ISU to get ready for Fall 2010 efficacy work with goats
4. Lisa: Follow up on foreign data information for deer. Meg already has HFS data. Efficacy will need to be done in US. Need to see if we can get TAS data.

OTHER BUSINESS

*Fall Meeting*

It was tentatively decided to hold the annual fall meeting in Rockville, MD on September 20/21<sup>st</sup> on the condition of coordinating lobbying efforts at that time. The final decision on the timing of the meeting will be made when the budget situation becomes clearer. This will be followed on a month-to-month basis and discussed at our monthly teleconferences.

There being no further business, the meeting was adjourned at 12:30 pm.



RESPECTFULLY SUBMITTED:

John G. Babish, Ph.D.

Date: 6/12/10

Minor Use Animal Drug Program/NRSP-7 National Coordinator