

Avian Flyer

Who We Are

Special points of interest:

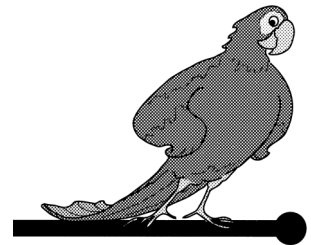
- Academic Based Service
- Active Research Program
- Quality Diagnostics
- Noted Contributor to Avian Medicine
- Proven Record of Publications and Presentations

The laboratories of the University of Miami Avian and Wildlife Laboratory are managed by members of the faculty of the Division of Comparative Pathology. Our laboratory is directed by a Diplomate of the American College of Veterinary Pathologists and has operated as part of the university for the past 30 years serving practitioners throughout the world.

The main strength of the test services is our academic base. Our pathologists can use the broad expertise of other members of the Department of Pathology as well as the clinical and basic research faculty of the

university departments. Our staff includes faculty involved in basic research which broadens our proficiency in diagnostics and assists our service in meeting and understand your needs in challenging diagnostic cases.

Nearly 15 years ago, the division dedicated a branch of the laboratory to establish a strong avian diagnostic test array to meet the changing needs of our veterinary clients. Our staff of veterinary immunologists and pathologists have designed and implemented many new tests in avian infectious diseases. In addition, we have optimized equipment for low sample



volume testing. Technical staff have been dedicated to processing of only avian and exotic samples. Our commitment to the avian service is evident in our numerous national meeting presentations and publications.

Inside this issue:

Sarcocystosis	2
Biochemical Testing for Liver Disease	2
Study of Parrots with FDB	2
<i>Encephalitozoon cuniculi</i> testing	3
About Our Lab Services	3
New Publication: Avian Digest	3
Contact Info	4

See Us at Savannah!

Dr. Carolyn Cray, Professor of Clinical Pathology, will be presenting at both the annual AEMV and AAV meetings in Savannah.

Her AEMV talk is entitled, "Evaluation of the Acute Phase Response to Inflammation in Mammals". Dr. Cray will present her latest research in the acute

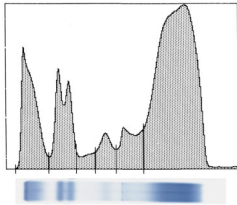
phase protein response in small mammals. Both EPH and the application of specific ELISA assays will be demonstrated. This presentation should provide an excellent overview in the basics of markers of acute inflammation.

Her AAV talk is entitled, "Optimizing Sample Type and

Handling for Best Diagnostic Results". This talk will give you the best foundation in sample handling. Basic procedures will be reviewed as well as some hints on how to get the best results for your patients.

See us also in the exhibit hall this year!

Sarcocystis Presentation and Pathology



A polyclonal hypergammaglobulinemia in a case of sarcocystosis.

Sarcocystosis is a sporadic disease that more frequently occurs in the warmer areas of the United States infecting birds of the Passeriformes, Psittaciformes, and Columbiformes families.

Infected birds often present with variable clinical signs, making antemortem diagnosis difficult. Our lab has previously demonstrated the utility of an antibody serology test

and protein electrophoresis in the diagnosis of birds with non-acute presentation.

In the current study, we review 11 different cases including those with acute pulmonary disease, muscular disease, and neurological disease. The case studies included birds that were assessed at multiple time points and some which were treated with intermittent relapses. Two of the birds

succumbed to a subsequent fungal infections. Seven (of 7 tested birds) were positive by the *Sarcocystis* IFA serology test. Eight (of 8 birds) exhibited marked changes in beta and/or gamma globulins by protein electrophoresis. These results were found in those birds with neurological and muscular forms of the disease.

Citation:

Av Dis 52:187-194, 2008

Contact the lab if you would like reprints of any of our publications.

Biochemical Testing and Liver Disease

The goals for this study were two fold: 1) examine the association of AST/CPK levels with high bile acids levels and 2) determine if there was an association between particular values for some analytes and the presence of hepatic disease.

We examined 442 samples representing 8 species of psit-

tacine birds for levels of AST, CPK, protein fractions (by EPH), and bile acids. We found that the often used corollary of a high AST and normal CPK concentrations as a screening test for hepatic injury or disease is not statistically supported.

Secondly, in those birds with confirmed disease, elevated bile acids levels had the highest association followed by elevations

in alpha 2 globulins, AST, LDH, and alpha 1 globulins. These data emphasize the sensitivity of bile acids as a test for liver disease and suggest that bile acids should be considered in a primary screen rather than as a followup test to AST and CPK chemistry results.

Citation:

JAMS 22(1):17-24, 2008



An example of our ongoing research program in avian medicine.

Feather Damaging Behavior in African Greys

In association with faculty member Dr. Susan Clubb, a large group of African grey parrots with FDB was studied.

Some interesting findings:

1. T4 levels were not different between normal and

FDB birds but the magnitude of TSH stimulation was lower in FDB birds.

2. FDB birds may have an increased stress response to handling as assessed by changes in the CBC.

3. FDB birds have elevated levels of alpha globulins and titers of antibody to *Aspergillus*.

Citation:

JAMS 21(4):259-264,2007

Serological Testing for *E. cuniculi* in Rabbits

A multi-year study examining the application of an ELISA and protein electrophoresis in the diagnosis of *Encephalitozoon cuniculi* (ECUN) in rabbits was recently completed.

Preliminary findings of this study were summarized at last year's AEMV meeting and the work is currently under review for publication.

Antemortem diagnosis of ECUN infection is very

problematic as most rabbits are found to carry antibody to the agent in the absence of disease. Clinical presentations are often similar to those seen with other infectious agents.

In the current study, we sampled 203 rabbits. Those rabbits with suspected infection demonstrated 1.7 higher levels of antibody than those rabbits which were clinically normal or were

suffering from a non-ECUN related infection. Both ECUN suspect and abnormal but non-ECUN suspect rabbits also exhibited increased levels of gamma globulins and a lower A/G ratio. The combination of these two tests may aid in the diagnosis of ECUN infection in pet rabbits. Studies are underway to define the composition of the gamma globulin fraction and the prognostic value of EPH.



Ongoing studies on the application of new serodiagnostic testing for *E. cuniculi*.

Our Diagnostic Services

Hematology: Absolute (not estimated!) cell counts by the Unopette technique

Chemistry: We specialize in low volume samples; we do not dilute low volume samples beyond recommended protocols to obtain results.

Specialized testing with in-house ranges for bile acids

Protein electrophoresis: More than 15 years of experience with avian, exotic, and wildlife species. Extensive research in this field.

Infectious Disease: Unique test offerings for Chlamydia, Sarcocystosis. Panel available also for testing of rodents.

Computer Access: On line access to all your results via the web.

Turnaround time: Most tests completed on the day of delivery, all within 24 hours of receipt.

Special Handling of your sample? Sample collection questions? **Just ask.**

Using and establishing the diagnostic standards. No shortcuts in handling your samples.

Announcing: The Avian Digest

The Avian Digest is a free publication available since January of 2008 to all clients of the Avian and Wildlife Laboratory.

The digest provides working summaries and reviews of current publications of interest to practitioners of avian medicine. The journals

include those not commonly accessible to many of the veterinary community in efforts to keep you updated on all the latest research studies that may be important to your practice and have an impact on the future of avian medicine.

Reviews include a synopsis of the study methods and results as well as a summary of implications of study findings.

If you want to receive these special issues, contact the lab.



A new publication to serve the avian veterinary community.

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Quality diagnostics with an active research program. An academic based laboratory service which provides routine and specialized test services while furthering the field of avian medicine.

Contact Us!

Client Services is available to serve you Monday through Friday. We can also be reached via the web.

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***See you at AEMV and AAV
in Savannah!***

