Accreditation Committee

Chair Leon Thacker.
The AAVLD Accreditation Committee met on the morning of October 22, 2004 in the Sheraton, Greensboro, NC from 8:00 am to 12:15pm. Fourteen of the 15 members of the committee were in attendance. Minutes of the July 24, 2004 meeting of the Committee held in Philadelphia, PA were approved as distributed. The financial report of the Committee were approved as presented by Dr. Alex Ardans.

Progress updates of five laboratories were presented and approved. Site visit reports of two laboratories were received and reviewed. Accreditation status of the two laboratories were established by committee vote. Preliminary reports of two laboratories that were recently visited were given by site visit committee members, no vote on status of these laboratories was taken. Four laboratory site visits in 2004 were yet to be made.

Quality Assurance manuals, timelines for incorporating items of the manuals and named Quality Assurance managers of the 40 AAVLD accredited laboratories were reviewed and discussed. To date all laboratories are within expected acceptable completion of the items required for incorporating the revised Minimum Essentials into their standard operations. The respective laboratories are commended for their accomplishments in these items.

The committee discussed and agreed to arrange for and hold an assessor training session at the February, 2005 meeting of the Committee to be held in LasVegas. In addition to the members of the Accreditation Committee, members of the AAVLD Quality Assurance Committee will be invited to attend the assessors training session.

The next meeting of the Committee will be held in LasVegas at the time of the Western States Veterinary Meeting.

Awards Committee

Chair Terry McElwain
The Awards Committee met during the annual meeting to discuss evaluation criteria and make the final selection for the AAVLD Foundation funded best graduate student oral and poster presentations. The best graduate student poster presentation went to Nichole Hines, Iowa State University, for her poster on "Evaluation of the BACTEC(r) 960 MGIT(tm) System for Growth of Mycobacterium bovis", by N. Hines and J. Payeur. The best graduate student oral presentation award went to Dr. Christy McKnight, Michigan State
University, for her presentation "Tongue Is An Excellent Sample for Parvoviral Diagnosis in Dogs and Cats" by C.A. McKnight, M. Kiupel, A. Wise, and R. Maes.

During the year, the Awards Committee also provided names of potential lifetime membership awardees to the Executive Board for approval, and selected the Pope Memorial Awardee, who this year was Dr. Bruce Akey. The committee also selected the AAVLD Foundation funded best JVDI full manuscript by Charles Hibler, Kathi Wilson, Terry Spraker, Michael Miller, Robert Zink, Linda DeBuse, Elaine Andersen, Darrell Schweitzer, James Kennedy, Laurie Baeten, John Smeltzer, Mo Salman, Barbara Powers: Field validation and assessment of an enzyme-linked immunosorbent assay for detecting chronic wasting disease in mule deer (Odocoileus hemionus), white-tailed deer (Odocoileus virginianus), and Rocky Mountain elk (Cervus elaphus nelsoni). 15:311-319, 2003. (Veterinary Diagnostic Laboratory and Animal Population Health Institute, Colorado State University and the Colorado Division of Wildlife. The AAVLD Foundation funded JVDI Best Brief Communication Award was given to Irene Schiller, Zen Huat Lu, Lloyd Vaughan, Roseline Weilenmann, Stephane Koundrioukoff, Andreas Pospischil: Establishment of proliferative cell nuclear antigen gene as an internal reference gene for polymerase chain reaction of a wide range of archival and fresh mammalian tissues. JVDI 15:585-588, 2003. (Institute of Veterinary Pathology and Institute of Veterinary Biochemistry and Molecular Biology, University of Zurich)

Finally, the Awards Committee selected graduate student travel awardees. This year three travel awards, two AAVLD Foundation funded general and one for pathology, were provided. The General awards went to Kathleen McIntosh, University of Saskatchewan, and Alexandre P. Loretti, University of Guelph. The Pathology Award went to Julius A. Haruna, University of Prince Edward Island.

**Membership Committee**


The committee met October 23, 2004 in Greensboro, NC. There were 4 members and 1 guest present.

1. **New members orientation**
   The first AAVLD new member orientation meeting was held on Friday, October 22 preceding the President’s reception. There were 41 new AAVLD members present. During the meeting the Drs. O’Toole and Blanchard outlined the organization of AAVLD, the function of the various committees and the AAVLD relationship with the USAHA. Thirty-nine attendees signed in and indicated a wide range of interest. The interests included: pathology-9, quality assurance-7, diagnostics-6, virology-5, microbiology-4, molecular biology-3, bacteriology-2, safety-2, toxicology-1, epidemiology-1, immunology-1. Allison Reitz from the secretary’s office was present and answered questions about dues payment and directory publication. Based on the attendance and feedback received, the committee strongly recommends continuing a new members’ orientation next year.

   Action: 1. The membership co-chairs will repeat this in 2005, inviting the incoming president of USAHA (or designee) to participate.
   2. An email notice will go out to new members of the time/date/place of the meeting within 2 weeks of the 2005 meeting.
   3. A reminder slip of the time/date/place of the meeting will be included with the AAVLD registration packet.

2. **Membership statistics**
   The membership statistics as of August 2004 were reviewed. There were 1,169 members which is a 6.3% decrease in membership from 2003. The change in the membership over the last four years was reviewed. The committee discussed ways of maintaining a more stable membership base, including extolling membership benefits and encouraging committee involvement. There was also discussion to again prepare a display describing the purpose of AAVLD that could be used at state and regional meetings. Dr. Mock explained that the current price structure for members and non-members registration fees makes it cheaper for non-members to become members. It is important to explain the benefits of continuing membership to such individuals.

   Action: 1. Drs. O’Toole and Mock volunteered to write text for a display poster to use at national and regional meetings. This will be shown to the Executive Board to get its approval, and permission to cover the costs of printing copies. The posters will be kept in the AAVLD offices and made available to whoever can use them.
   2. The AAVLD office will work with the list serve master (Jim Case) to see if it would be possible to get individuals automatically subscribed to the list-serv when they become members and their email is available.
   3. Canadian diagnosticians’ meeting: Dr. Shane Renwick said that the next annual meeting of Canadian diagnosticians will be June 4 – June 8 in Saint-Hyacinthe, Quebec. Dr. O’Toole offered to attend the meeting to promote the AAVLD.

3. **Membership turnover survey**
   There was discussion on trying to determine the reasons for dropping membership through a survey included in renewal reminder notices. The committee will review any data generated from the reminder notice survey.

   Action: 1. The survey will go out with the second reminder letter

4. **Street Addresses of Accredited laboratories**
   It was requested that the street address of the Accredited Laboratories be included in the Membership Directory to assist in shipping diagnostic specimens.
Publications Committee

Chair David Steffen. The committee met Friday October 22th, 2004 from 8:00-9:50am. in Greensboro, NC.

1) Monographs
   >Dr O'Ttoole expressed interest in web publication of a text on abortion diseases to update/replace that of Dr. Kirkbride which is outdated. He will seek co-authors. Copyright concerns and approaches for Web publishing were addressed.
   >Clostridia monographs remain in progress.
   >Dr. Steffen suggested a need for an editorial mechanism for monographs that is more structured to encourage submissions. This process would include JVDI editorial board input so manuscripts could be considered as review articles or monographs. This will be explored with the executive board and JVDI editorial board.
   >Concerns were raised about library access to web based published monographs and search engine capabilities to connect with the data.

2) Newsletter, Dr. Blanchard, No new business.

3) JVDI
   Dr.Saliki expressed appreciation for Dr. Kreeger's continued assistance in transition. The board reviewed several proposals for on-line manuscript review and processing. The system will speed review, increase submissions, reduce postage expense and time demands on staff following up reviews. There may be a slight increase in cost. Publications committee endorsed the adoption of the manuscript review proposal and forwarded that endorsement to the executive board.
   JVDI ranks 20th for citations of 120 animal science and veterinary journals. Acceptance rate is around 60%. Time to decision and reasons for delays in publication were discussed. Editorial changes to reduce time to print were discussed.

4) Web Site
   a. The website was improved and appreciation was relayed to the editor Dr. Janke by the committee. A recommendation was made to post an issue of JVDI on the web to be updated annually so nonmembers can see an advantage they will get through membership. The JVDI is on the secure site generally by the publication date.
   b. Archiving list serves was requested. Copying the list into the secure site archive and a Google search engine was suggested to see if that is a low maintenance way to meet the need of users.

5) General
   a. An opening for a committee slot exists interested persons should contact Dr.Steffen.

Animal Health Information Systems, Joint USAHA/AAVLD Committee

Co-Chairs: Dr. Bruce L. Akey,* Albany, NY and Dr. François Elvinger,* Blacksburg, VA presiding.
The Committee on Animal Health Information Systems met on Monday, October 25, 2004 from 12:30 to 5:30 p.m. There were 58 attendees signed in, including 15 committee members, although at times there were in excess of 80 people in the room. Twenty attendees requested to be added to the committee roles. Minutes of the meeting are as follows:

Dr. Akey welcomed the participants and laid out the agenda for the session.

Dr. Stanley Bruntz, USDA:APHIS:CEAH:National Surveillance Unit, Fort Collins, CO presented an annual update on the Animal Health Reporting System (NAHRS), now integrated with the newly created National Surveillance Unit at the Center for Epidemiology and Animal Health. In 2003, 40 States participated in the NAHRS, with 36 States reporting each of 12 months. As of September 2004, all but nine States were participating, with 5 of those slated to participate by the end of 2004. Recruitment of the last remaining non-participants is now directly supported by the APHIS administrator and the VS deputy administrator. Reporting is to be facilitated in the near future through a newly developed Web-based reporting tool, to be piloted in November 2004 and made available to all States by February 2005. Dr. Bruntz presented a set of changes to the NAHRS Unified Methods and Rules, proposed at the NAHRS Steering Committee meeting, September 13-14, 2004, in Fort Collins, CO. The proposed changes and their dispositions are presented in the report of the business section at the end of this report.

Dr. Francois Elvinger presented the outcome of the resolution submitted by this committee, the USAHA Foreign and Emerging Diseases Committee, and the AAVLD Epidemiology Committee at the 2003 Annual Meeting, on Strategic Planning and Development of a National Animal Health Surveillance System. The resolution requested from USDA:APHIS:VS to establish a working group which was to develop a strategic plan for animal disease surveillance. Veterinary Services, under the leadership of Dr. Valerie Ragan,
Assistant Deputy Administrator, put in place a National Animal Health Surveillance System (NAHSS) Steering Committee which participated and oversaw the drafting of such a strategic plan by and with the National Surveillance Unit, led by Dr. Brian McCluskey. The draft of the plan has been reviewed by the Veterinary Services Management Team, and has been posted for general review on the NSU website at http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/nahss_strategic_plan_draft.pdf.

Dr. Brian McCluskey, USDA:APHIS:CEAH:National Surveillance Unit, Fort Collins, CO introduced the National Animal Health Surveillance System Strategic Plan and the National Surveillance Unit (NSU), located in Fort Collins, CO. The NSU was established in late 2003, and currently is in the process of hiring the necessary staff to fulfill its mission, laid out in part in the NAHSS Strategic Plan. The Strategic Plan is to provide the framework to set priorities and create a roadmap for the transformation of current and design of future surveillance activities into the NAHSS to support greater protection of animal populations from endemic, emerging and foreign animal diseases. Surveillance is to be comprehensive, coordinated, and integrated, and needs to mobilize and rely on partnerships with all federal, State, and industry stakeholders. The Strategic Plan defines 4 major goals, including 1. Early detection and global risk surveillance of foreign animal diseases and 2. of emerging diseases; 3. enhanced surveillance for current “program diseases;” and 4. monitoring and surveillance for diseases of major impact on production and marketing. Twelve objectives were defined and fitted as warranted to the 4 goals, with the addition of action items and target dates for those action items listed for all objectives. The NSU, which was recently regrouped with the National Animal Health Monitoring System (NAHMS) into the Center for National Animal Health Surveillance (CNAHS), is to assume the leadership role in design and implementation of the National Animal Health Surveillance System.

Dr. James Case, California Animal Health and Food Safety Laboratory System, University of California, Davis, presented the status and future developments of the National Animal Health Laboratory Network (NAHLN) Information Technology (IT) component. The key goals of the NAHLN are the expansion of detection and response measures and capabilities for pathogens that threaten animal agriculture. Therefore the NAHLN is to bolster laboratory capability for select agents, which requires sufficient and well trained personnel, appropriate equipment and testing. Standard diagnostic approaches for identification of select agents have to be deployed, data sharing among animal health agencies has to be bolstered, a secure, two-way communications network and a national repository for animal health data needs to be created. This requires the bolstering of cooperation and communication amongst animal health officials, and with maintenance of the confidentiality of source data has to provide alerts at appropriate response level. Four major areas for development of the NAHLN IT infrastructure have been recognized, including the development of a laboratory results repository to capture standardized result data, a laboratory registry of capabilities and capacity, and a registry of validated methods to support NAHLN labs, which are all linked by secure communications. Of the 12 laboratories identified for the first phase of NAHLN, 5 laboratories (CA, CO, IA, NVSL, WA) have been selected for NAHLN IT pilot project to develop message profiles (HL7 standards), and terminology subsets for tests (LOINC), for species/breeds and results (SNOMED), and unique identifiers (NAIS, ISO). Secure communication processes were established using cURL and digital certificates. Future developments include the expansion of the IT infrastructure to all NAHLN laboratories, which now number 44 laboratories in 37 States. This will require the development and distribution of detailed system requirement specification, the production of a comprehensive messaging implementation guide for laboratories, continued enhancement of terminologies to support the NAHLN (secure communications and visualization), training and resources for new laboratories, expansion of coverage of important diseases as resources become available and cooperation with other entities. Obstacles to full development and implementation of the NAHLN are the limited funding to support all activities, the limited resources in health information standards, the limited personnel time to dedicate to NAHLN activities, which leads to the establishment of interim solutions that do not conform to NAHLN standards.

Dr. Wayne Cunningham, Colorado Department of Agriculture, Denver, CO, introduced the Tri-National Consortium National Animal Identification System Project. This project covers multiple species including cattle (beef and dairy), sheep and goats, horses, elk, and swine (premises only). The main questions addressed in multiple pilot projects are to determine if Radio-Frequency Identification (RFID) tags are practical as to their retention, readability and economic impact, and if a private company would be able to distribute the premises ID, and the animal ID and ID devices, to manage the associated database, and to maintain confidentiality in a consortium including several Indian Nations, the States of Colorado, Arizona and New Mexico, and the adjacent Mexican States of Sonora and Chihuahua. The pilot projects are capitalizing on already available resources, personnel (including ~ 60 brand inspectors) and marketing channels, as well as taking advantage of existing databases (i.e. brand database) and are to determine what and when to ID, which could be either at change of ownership, at shipping time, branding time or calving time (birth), or eventually at heifer Brucella vaccination time. The projects contain educational components at the local, State and regional level. The pilot projects are to establish if inter State and international traceability within defined guidelines can be assured.

Mr. Charles Anderson, Computer Aid, Inc., PA, provided the Committee with a succinct overview of the concept and uses of Data Warehouses and Data Marts. A Data Warehouse contains data from multiple databases or other sources and includes tools for selectively extracting and analyzing information. Because it pulls together information from multiple sources, queries and analysis can generate knowledge not attainable from any single source. Data Marts are considered a subset or smaller version of a Data Warehouse and generally are focused on one specific subject matter area. Perhaps the single most important process involved in the Data Warehouse is the Extract, Transform and Load (ETL) procedure which applies user defined rules for validating data and translating data from different sources into formats that are compatible and cross linked. A Data Warehouse can provide many types of functionality including data consolidation, multi-source analysis, trend analysis, disease surveillance and monitoring and data layers
of Geographic Information Systems (GIS) viewing and analysis. In addition, it can serve as the nexus for harmonizing and formatting data to be passed on to other information systems such as the federal Generic Data Base (GDB) thus avoiding time-consuming double entry of data into multiple systems. Part of the implementation of a Data Warehouse includes the development of meta-data and history tables to track the source of information and any alterations to the data over time. Maintenance of Data Warehouse systems has become less onerous with the development of self-regulated database software capable of automatically conducting internal checks and corrections, reducing the cost of overall database administration. Successful development, implementation and use of a Data Warehouse depends on many factors including support from the highest administrative levels, defining realistic expectations, avoiding loading data just because it’s available, choosing a financially stable vendor, not missing out on adding non-traditional data types (pictures, recordings etc) and, perhaps most importantly, choosing a project leader that is firmly grounded in the needs of the end-user.

Dr. Steve Weber, USDA:APHIS:CEAH: Center for Animal Disease Information Analysis, Ft. Collins, CO, gave an update on the activities of the Information Technology Issues Group (ITIG) which was organized as a result of the Veterinary Services Animal Health Safeguarding Review. Recommendations from this review concerning Information Technology (IT) have been grouped into issues areas including electronic commerce, updated technology identification and implementation, leadership in setting information technology standards, development of interfaces with other databases and systems, confidentiality of data, the increasingly important role of GIS in animal health programs and the identification of changes needed in the IT infrastructure of VS. Progress has been made on one of the key action areas - Confidentiality. As a result of the acceptance of the action plan recommended by the Issues Group, the Veterinary Services Management Team agreed to the formulation of a task force to identify issues related to the confidentiality, privacy and security of information that is requested and maintained by Veterinary Services. That task force met once in 2004 and expects to develop specific recommendations during FY 2005. Action plans for all of the other issue areas will be completed and presented to the Veterinary Services Management Team in January 2005, for prioritization. Notable advances made by VS and its collaborators during FY 2005 that support the Safeguarding Review Recommendations include completion of a Veterinary Accreditation System, completion of the National Animal Health Laboratory Network pilot system, expansion of the use of the Interstate Certificate of Veterinary Inspection to 6 states and the implementation of the National Premises Allocator component of the National Animal Identification System.

During the business section of the agenda, the previously mentioned changes to the NAHRS Unified Methods and Rules, proposed and approved at the Steering Committee meeting from September 13-14, 2004 in Fort Collins, CO, were submitted for approval by the membership of the Animal Health Information Systems Committee. These changes were: 1. on Page 20, to add the definition for ‘confirmed disease’ to read as follows: “Disease confirmed by Chief, State animal health official utilizing NAHRS reporting criteria for the disease, which may include references to compatible clinical signs, the specified standard of laboratory testing, and any additional epidemiologic information; in the remainder of the UM&R, replace the word ‘clinical’ with the term ‘confirmed disease’ where indicated; 2. on Page 21, last paragraph, to remove the word ‘only’ in the sentence “The contents of the report will be distributed only to the Chief Animal Health Official of each participating State and select APHIS personnel.” The sentence refers to the Annual Summary Report, with no reference to individual States or farms; for 3. B101 Bovine Anaplasmosis, to remove the complement fixation test as an approved test from the reporting criteria and to follow the OIE manual; for 4. B201 contagious equine metritis, to state in the reporting criteria that “This disease is a foreign animal disease for the United States of America …” in order to be consistent with the wording in the reporting criteria of all other foreign animal diseases; for 5. B205, equine infectious anemia, to word the first sentence of the reporting criteria to read as follows: "Presumptive diagnosis may be based on serology using a USDA-approved test (SA-ELISA II, CELISA, Vira-CHEKTM ELISA or AGID) as outlined in the EIA Uniform Methods and Rules;“ for 6. B206, equine influenza, to change the reporting criteria to read as follows: "Presumptive diagnosis may be based on compatible clinical signs plus serology (HI)." Definitive diagnosis is based on demonstration of the agent (virus isolation); for 7. B211, equine viral arteritis, to change the reporting criteria to read as follows: "Presumptive diagnosis may be based on compatible clinical signs plus serology (SN titer of 1:4 or greater) as outlined in the EVA Uniform Methods and Rules. Definitive diagnosis requires demonstration of the agent (virus isolation), an epidemiologic investigation by a State or Federal Veterinarian and the concurrence of the State Chief Animal Health Official and the Federal Area-Veterinarian-in-Charge.” Motions for acceptance of these changes were submitted and seconded for each of the listed changes. Discussions followed on anticipated approval by State Veterinarians (change 2.), approval of the change on bovine anaplasmosis by the bovine commodity working group (change 3.), flexibility provided to the State Veterinarian for determination of presumptive or definitive diagnosis (changes 5. and 6), especially given the possibility of vaccine induced antibodies (change 6.). All proposed changes were unanimously approved by vote of the committee members. Prior to adjournment of the committee meeting, a resolution on Federal Funding for the National Animal Health Laboratory Network (NAHNL) was voted on and unanimously approved by the committee members.

Approved Methods Committee

Co-chairs: Barbara Martin and Jim Pearson. Committee met October 22, 2004 from 8:00-10:00am.
Committee members in attendance: Bruce Akey, Sandy Baldwin, Jim Case, Francois Elvinger, Jim Everman, Barb Martin, Dick Oberst, Jim Pearson, and Mark Thurmond
Nine committee members and 29 guests in attendance
World Organization for Animal Health (OIE) test validation and certification: Peter Wright reported on changes in the OIE test validation and certification process and the NVSL validation template. Until now, the OIE has considered animal disease testing mainly as it pertains to trade. Accordingly, it classifies animal disease diagnostic tests as prescribed or alternative tests. There are many other reasons for testing, including: serologic monitoring, demonstration of freedom from infection, estimation of prevalence of infection for risk assessment, etc. Therefore, test validation should be a process that will demonstrate fitness of that test for a particular use. The OIE has received requests from many Member Countries and also from commercial test manufacturers to provide clear guidelines and much broader recognition of diagnostic tests as fit for specific purposes, not only for trade.

To this end, the OIE in collaboration with the Joint Food and Agriculture Organization/ International Atomic Energy Agency (FAO/IAEA) Division of the IAEA has developed a framework whereby fitness for purpose is incorporated into test validation. Guidelines and a standard template are being established for the preparation of dossiers to be submitted to the OIE for test evaluation and certification. The OIE is presently establishing a Secretariat that will manage the evaluation process and a registry of those tests that have been successfully validated and certified. OIE Reference Laboratories will be intimately involved in the evaluation process and in the development of panels of reference materials that will facilitate uniform evaluation and comparison of test methods.

APHIS test validation: Tammy Beckham, National Veterinary Services Laboratories (NVSL), reported on the Animal Plant Health Inspection Service (APHIS) validation efforts. APHIS is currently working to complete field validation for classical swine fever (CSF) and the Tetracore® and Dupont® foot and mouth disease (FMD) real-time-PCR (RT-PCR) assays. Over 500 positive FMD samples have been tested using the Tetracore® FMDV rRT-PCR assay. Testing of these samples with the Dupont® FMD assay is currently underway. Negative cohort/specificity testing for both CSF virus and FMD virus will begin within the next few months. Anticipated dossier review and finalization will occur in early March 2005 for CSF real-time RT-PCR and in early May 2005 for the Tetracore® FMD real-time RT-PCR assay. Field validation for the Vesicular Stomatitis rRT-PCR assay is approaching completion and negative cohort testing is scheduled to begin in November of 2004. The African swine fever virus RT-PCR assay has been developed and APHIS is currently reviewing the bench validation packet. rRT-PCR assays for Rinderpest, Contagious Bovine Pleuropneumonia, and Lumpy Skin Disease are currently being developed and bench validated. Two personnel from each of the twelve pilot National Animal Health Laboratory Network (NAHLN) laboratories were trained and proficiency tested in Oct/Nov of 2003 on the Tetracore rRT-PCR assays for CSF virus, FMD virus, and vesicular stomatitis virus. Future training for NAHLN laboratory personnel will include training on wet reagents for the Tetracore FMD and CSF rRT-PCR assays (early 2005) and on the 96 well extraction/PCR for FMD and CSF rRT-PCR assays (summer 2005).

Library of Analytical Methods: Patrick McCaskey, Executive Associate of the FSIS laboratories, reported on the Library of Analytical Methods, a component of eLEXNET (Electronic Laboratory Exchange Network). The Library of Analytical Methods will allow laboratories to:

- Access, submit, search, review, and print methods (both validated and non-validated) through the internet via eLEXNET
- Compare methods to determine which method is most appropriate for a particular need
- When appropriate, submit sensitive methods to a secure component of the Library that can only be viewed by users who are authorized to access these methods

The Library of Analytical Methods provides a search engine for retrieving methods associated with analytes, technologies and matrices. All types of methods, in most standard formats (Word, PDF, etc.), can be entered by individual laboratory representatives. Submitted methods are then displayed in read only files that can be printed for laboratory use. All methods can be retrieved by searching for source, organization, matrix, technology, analyte, or type of method. The Library of Analytical Methods was released in pilot phase in April 2004. Six laboratories/organizations participated in the pilot; they were: USDA FSIS Eastern Laboratory, USDA FSIS Western Laboratory, USDA APHIS National Veterinary Services Laboratory, FDA Northeast Regional Laboratory, FDA Southeast Regional Laboratory, and the Florida Department of Agriculture and Consumer Services -food Lab. As part of the pilot, a total of 21 methods have been entered in the repository. Eleven of these have been reviewed to ensure that the essential information fields were properly completed, but not for scientific validity. These have been released to the Library. Additional improvements are being made to improve user friendliness and accessibility. The Library should be available to laboratorians in 2005.

Proposed matrix for approved tests: Barb Martin led a discussion on the test matrix that had been prepared and circulated to the members of the committee. It was decided to develop a template to summarize the performance characteristics and the acceptable matrices for each test. The template will be provided to each of the AAVLD discipline committee chairs and they will provide feedback to the Approved Methods Committee. It will be the responsibility of the discipline committees to complete the template for assays in their respective disciplines. The co-chair of the Approved Methods Committee agreed to serve for one more year in order to complete this template.

Aquaculture Committee, Joint USAHA and AAVLD

Co-chairs: Drs. Scott LaPatra (USAHA) and Tom Baldwin (AAVLD). The committee met from 12:30-5:30pm, October 25, 2004
Opening comments - Scott LaPatra
Attendees were welcomed and asked to introduce themselves.

**Update from the National Aquaculture Association - Betsy Hart**

A short review of the NAA, a producer organization, was provided. The diverse nature of the membership was emphasized, including representation of all aquaculture species. The NAA provides a unified voice for aquaculture, helping to assure the vitality of the various aquaculture industries. Committees represent various components of aquaculture, and through their governing board, assure a united stand on issues. The NAA offers a strong informational web site. Current issues facing organized aquaculture were reviewed, including the National Animal Identification Program and environmental issues.

**Update from the National Animal Identification Program - Valerie Ragan**

NAIP is being developed for disease eradication, and is applicable to any disease and all livestock. The program is currently assessing applicability to aquaculture and how to best implement an effective program; i.e. the program will be tailored to the animals in question. An industry working group has been formed that is working with USDA on an acceptable plan for the use of the NAIP in the aquaculture arena.

**Update from USDA-APHIS - John Clifford and Jill Rolland**

USDA has found it important to work closely with the aquaculture industries in establishing programs and protocols related to aquatic animal diseases that could threaten the aquatic industry. The National Aquatic Animal Health Plan (NAAHP) is being developed, which is a guidance document, with three federal agencies involved: Commerce, Interior, and USDA. A partnership of these agencies with industry and professional representatives has been created to develop a transparent plan based upon consensus.

A presentation was provided summarizing the NAAHP as well as updates on the response to recent outbreaks of infectious salmon anemia (ISA), spring viremia of carp (SVC), and white spot disease of shrimp. EU-generated directives related to export of fish, fish products, and mollusks to the EU were reviewed.

The presentations generated lively audience discussion related to USDA interactions with and impact upon producer groups and aquaculture-related commerce.

**Update from AVMA Aquatic Veterinary Medicine Committee - David Scarfe**

The background and activities of the AVMA Aquatic Veterinary Medicine Committee (formerly known as the Aquaculture and Seafood Advisory Committee) were presented. The committee has addressed a wide variety of topics related to aquatic animal health, regulatory issues, and environmental concerns. These include national aquatic animal health programs, diagnostics, therapeutic agents, effluents, seafood safety, and promotion of the important role of veterinarians in the aquaculture industry.

**The Whitney Laboratory for Marine Bioscience - Bob Kahrs**

The Whitney Laboratory in St. Augustine, Florida, affiliated with the University of Florida, is developing a program in marine animal health that includes development of a Center for Marine Animal Health. Training and funding are available for graduate students and post-doctorates. Attendees were urged to contact the laboratory director for more information.

**Update from the Fish Health Section/American Fisheries Society – Scott LaPatra**

The FHS/AFS has continued its active involvement in fish health issues at all levels. The organization provides expertise to a variety of stakeholders, both public and private, in the aquaculture industries. The FHS provides professional certification, continuing education and regional and national meetings. They have recently developed a Standard Inspection Manual in collaboration with the US Fish and Wildlife Service that is reviewed annually and has been provided to the National Aquatic Animal Health Taskforce.

**Forecasting Disease Emergence in the Aquaculture Industry - Victoria Bridges**

A presentation from the Center for Emerging Issues summarized their overall activities related to analysis of emerging animal diseases, surveillance systems for emerging animal health events, and tracking and trending of health events. A current project is focused on forecasting disease in the aquaculture industry. The goal is to develop a “disease emergence profile” for the food fish industry. This includes describing characteristics of disease emergence factors through analysis of current situations and the forces for change. Predictive, decision-making tools are the anticipated result of this work.

**Old Business**

Last year’s resolutions, their fate, and USDA response were reviewed and discussed.

**New Business**

Stan Bruntz presented a request on behalf of the Committee on Animal Health Information Systems with respect to the National Animal Health Reporting System (NAHRS). This group is requesting appointment of a chair for the Aquaculture group. Motion: Jerry Heidel will assume the chair of the NAHRS Aquaculture Commodity Working Group and he will contact existing members to assess their willingness in continuing their membership; and in the absence of such willingness will fill the vacant positions with appropriate members. Motion carried.

**Resolution #1:** introduced by Jerry Heidel on behalf of Ralph Elston and the Pacific Coast Shellfish Growers Association.
The USAHA requests USDA-APHIS to promote listing of the paramyxean protozoan parasite *Marteiliodes chungmuensis*, known to infect oyster species including the Pacific oyster, *Crassostrea gigas*, and the Iwagake oyster, *Crassostrea nippona*, and possibly other bivalve species, as a Notifiable Disease in the Office Internationale Epizooties (OIE) International Aquatic Animal Health Code.

The motion in support of this resolution was defeated. The committee recommended that Dr. Elston directly contact Dr. Jill Rolland, USDA/APHIS, with a request for USDA/APHIS to consider listing of this parasitic disease; this would initiate a thorough review of the condition to determine if there is sufficient data to support this listing. Additionally, Dr. Elston should seek further producer support for diverse geographical areas of the United States.

Resolution #2: introduced by Don Hoenig.

The USAHA requests the United States Department of Agriculture Animal Plan Health Inspection Service (USDA/APHIS) to begin to work immediately to establish sufficient, annual funding for the long-term maintenance of the USDA/APHIS/Veterinary Services ISA program including indemnification for loss incurred by US salmonid growers in the implementation of the program. The motion in support of this resolution was passed (Appendix 1).

Resolution #3: introduced by Scott LaPatra

The United States Animal Health Association (USAHA) requests that the United States Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Veterinary Services (VS) to determine if the data needed to perform credible risk assessments exists and identify information gaps. Appropriate steps should be taken to fill in these gaps for the prevention of the introduction and the potential establishment of viruses of finfish (as identified in the National Aquatic Animal Health Plan) of economic significance into the US commercial farmed fish industry sectors. The motion in support of this resolution was passed (Appendix 2).

Appendix 1

UNITED STATES ANIMAL HEALTH ASSOCIATION 2004

RESOLUTION NUMBER: 1

SOURCE: AQUACULTURE COMMITTEE

SUBJECT MATTER: ADEQUATE LONG-TERM FINANCIAL SUPPORT FOR THE USDA/APHIS/VETERINARY SERVICES / MAINE DEPARTMENT OF MARINE RESOURCES / MAINE AQUACULTURE ASSOCIATION INFECTIOUS SALMON ANEMIA PROGRAM, AND INDEMNIFICATION, IN THE NORTHEASTERN UNITED STATES

DATES: October 21-28, 2004

BACKGROUND INFORMATION:

Salmon aquaculture is a multi-million dollar agricultural industry in the United States. An October 2004 study\(^1\) indicated that the farm gate value of Maine salmon aquaculture was about $50 million. The Maine industry is rebuilding after an economically-devastating outbreak of Infectious Salmon Anemia (ISA), a disease caused by Infectious Salmon Anemia Virus (ISAV), in 2001-2002. In 2000, the reported farm gate value of Maine salmon farms was $100 million annually. The current epizootic has caused losses totaling millions of dollars. ISA is recognized as a foreign animal disease and has been diagnosed on Maine salmonid fish farms again recently.

In November 2001, USAHA 2001 Resolution No. 04, called upon the United States Department of Agriculture/Animal Plant Health Inspection Service (USDA/APHIS) to, among other things, develop a USDA/APHIS ISA program which supports an ISA surveillance and monitoring plan component and an indemnity plan component. The final USDA/APHIS ISA program draft was approved on April 30, 2002. In December 2002, following the USDA’s determination that Federal assistance was necessary to effectively control this disease, which posed a threat to animal health and the U.S. economy, $8.3 million was released from the USDA Commodity Credit Corporation (CCC) to be used for indemnity payments, program activities such as: depopulation and disposal; clean up and disinfection; establishment of surveillance programs; epidemiology and diagnostic support; and training for producers and veterinarians.

The USDA/APHIS ISA protocol has been universally implemented on Maine salmonids farms, and until recently, no significant outbreak of ISA has occurred in U.S. waters although the pathogen was detected at several sites in the Cobscook Bay area in 2003 and early 2004. Among the likely reasons that ISAV loads in the marine environment have increased are disparities between U.S. and Canadian disease management protocols. While standardization of approach is being actively pursued on both sides of the international border, the situation in recent months has resulted in limited depopulation and disposal of pre-market fish from several Maine farms. An outbreak of ISA again appears imminent in Cobscook Bay.

Although some amount of indemnification is anticipated from the USDA for the most recent losses of young fish at Maine salmonid farms, the CCC funds are nearly exhausted. ISA is neither a simple nor transient phenomenon. The administrative and surveillance components of the ISA program have been funded by USDA for the near term but continuity of indemnity funding is also needed for the important purpose of encouraging farmers to swiftly eliminate infected stock before the appearance of clinical disease occurs and

dramatically increases losses. USDA/APHIS must therefore act quickly to provide long-term financial support for surveillance, monitoring and indemnification to assist Maine salmonids growers in effectively implementing the ISA program standards.

RESOLUTION:
The United States Animal Health Association requests the United States Department of Agriculture/Animal Plant Health Inspection Service (USDA/APHIS) to begin to work immediately to establish sufficient, annual funding for the long-term maintenance of the USDA/APHIS/Veterinary Services ISA program including indemnification for losses incurred by U.S. salmonid growers in the implementation of the program.

Appendix 2

UNITED STATES ANIMAL HEALTH ASSOCIATION - 2004
RESOLUTION NUMBER: 2
SOURCE: AQUACULTURE COMMITTEE
SUBJECT MATTER: RISK ASSESSMENT IN AQUATIC ANIMAL HEALTH
DATES: OCTOBER 21-28, 2004

BACKGROUND INFORMATION:
The poorly understood aspects of the life-cycles and survival parameters of exotic finfish viruses make the application of risk assessment to even the most studied models difficult. In its general sense, risk analysis is a tool to help decision makers and there will always be a need for supportive actions in order to help solve the problems generated by the process itself. Aquatic animal health is no different in this respect and since the concept is a relatively new application, there have been reports of difficulties in carrying out existing risk analysis methods.

The stability of infectious agents in different media and under different physical and chemical environments has been extensively studied for some viruses and virtually ignored for others. Gaps in the knowledge are due in part to difficulties in reproducing its life cycles and determining whether the agent is, in fact, inactive or otherwise unable to cause significant fish health problems. In addition, isolation of the agent under certain conditions can present significant challenges. Studies on the susceptibility of viruses to different physical or chemical parameters have often been conducted under artificial conditions and quantitative data on the rate of inactivation are lacking for many agents. To assess the potential risk for the introduction and establishment of an exotic finfish virus in an aquatic ecosystem, several factors associated with the agent must be determined. These factors include the lability of the agent to pH, cooling, freezing, heating, and the ability of the agent to survive freely in the environment.

RESOLUTION:
The United States Animal Health Association (USAHA) requests that the United States Department Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Veterinary Services (VS) to determine if these data needed to perform credible risk assessments exists and identify information gaps. Appropriate steps should be taken to fill in these gaps for the prevention of the introduction and the potential establishment of finfish viruses of economic significance into the US commercial farmed fish industry sectors.

Bacteriology Steering Committee

Co-chairs: Deepanker Tewari and Linda Schroeder-Tucker. The steering committee met from 8:00 to 9:30pm on October 23, 2004 in Greensboro, NC. The full committee and 10 members from subcommittee were in attendance. Ms L. Schroder-Tucker couldn’t be present and Dr Tewari presided.

Standardization of laboratory methods
Dr Tewari welcomed the group and opened the discussion on need for standardizing laboratory methods in the AAVLD bacteriology laboratories. The committee made following statement that due to existence of variability in culture and isolation methods among laboratories, laboratories should have written procedures for the tests that are conducted on-site. The committee plans to hold discussions with approved methods committee to set clear goals for developing and implementing uniform methods across AAVLD laboratories. The groups feeling was, wherever it is possible, Office International des Epizooties and or National Veterinary Services Laboratory protocols could be adopted and considered laboratory reference methods.

Select agent protocols
Committee last year had posted select agent culture and isolation protocols for viewing and comment on the AAVLD web site. The committee thus far has not received comments on these protocols. The committee plans to actively seek comments from its members and NVSL this year. Dissemination of these protocols through Bacti-Listserv is planned so that they are reviewed and finalized. The procedures are slightly different from American Society of Microbiology and Centers of Disease Control recommended laboratory procedures in that these protocols address culturing and detection of such agents from animal derived samples.

Salmonella isolation and standardization

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A procedure standardization request expressed by National Pork Board was received by AAVLD Bacteriology committee last year. The board wanted to encourage standardization of Salmonella isolation protocols among laboratories so the procedures for estimating prevalence could be compared from one research project to another. The board's concern was that researchers use a variety of techniques for salmonella isolation and therefore comparisons of prevalence estimates between manuscripts could not be achieved. This was addressed by the committee by holding a teleconference in October. Following this a survey was conducted through AAVLD-Listserv. The decision has been made to define Dr Paula Cray’s USDA Salmonella isolation protocol as a reference method, and to determine as closely as possible the detection sensitivity and specificity by using fecal samples of known status (positive or negative for Salmonella) from swine. This study will be conducted initially, and extended to compare other protocols (both culture and non-culture) to the reference method and to assess inter-laboratory variation in conducting the various tests for salmonella isolation and therefore comparisons of prevalence estimates between manuscripts could not be achieved.

**Workshop: Biological Terrorism Preparedness for Veterinary Bacteriology Laboratories**

Dr Karen Post is congratulated on successfully arranging a symposium and workshop entitled: Biological Terrorism Preparedness for Veterinary Bacteriology Laboratories. The program was co-sponsored by National Laboratory Training Network. There were 73 attendees and 9 speakers. This was the first time that different arms responsible for homeland security (Centers for Disease Control, United States Department of Agriculture, and Food Emergency Response Network) got together under one umbrella for laboratory training. Highlights of the session included presentations reviewing packaging/shipping requirements for infectious agents, laboratory testing methods for the presumptive and definitive identification of the bacterial select agents, discussion on responsibilities of involved entities in homeland security, and future plans for the involvement of veterinary diagnostic laboratories.

**Future plan**

For the coming year, the committee decided on keeping the communications open through Listserv and working towards goal of improving quality by sharing laboratory protocols and procedures and streamlining the administration and reporting of the bacteriology survey conducted by Bacteriology and Mycology subcommittee.

**Bacteriology and Mycology Subcommittee report**

Co-chairs: Drs. Susan Sanchez and William Fales. The committee met from 8:00 am to 10:30am on October 22, 2004.

1. **Internal Quality Assurance Survey** (aka “Check Test”). There were a total of 54 participating labs this year. The committee thanked Linda Cox from NVSL for her help preparing and mailing all the check test isolates. The survey consisted of 5 case histories and associated unknown organisms. In general, participants did quite well in correctly identifying the unknown organisms and in providing QC information as appropriate. Emphasis was put on the fact that this is a training exercise not so much as pass/fail test. This is an excellent forum for participants to become familiar with isolates they will rarely see because the animal species is not common in the state or because there are other specialty laboratories (i.e. Poultry) that see those cases. The question of how to help those laboratories that do not do well was formulated by the co-chair and the name of David Miller at NVSL was put forward. S. Sanchez will contact Dr. Miller and determine his willingness to offer training. Results from the antimicrobial susceptibility testing in the check test raised a discussion regarding reporting of appropriate antimicrobials and the responsibility of the laboratories to do so by using the appropriate panels and cascade suppression. It was agreed that 5 questions is a good number for the test. Some members asked why fungi were not part of the check test any more. NVSL has lost its expertise in fungi therefore they cannot provide this kind of sample for the check test. A change in how results of the check test are returned to the participants was discussed with the decision that results will be posted on the AAVLD website. Participating laboratories will receive and letter through email regarding their performance. S. Sanchez is going to explore the possibility of on-line submission of check test results; this will ease the forwarding of the check tests results to those that provided the questions. Six individuals volunteered to provide case histories for next year’s test: Doreene Hyatt, Susanne Hinkley, Brenda Love, Karen Post, Lindsay Oaks and D. Bemis.

2. Standardization of swine *Salmonella* culture methods: B. Love. This was a request from the National Pork Board to the committee to standardize *Salmonella* spp. isolation from pig herds for research and prevalence studies. Dr. Love asked for volunteers to form a subcommittee to study different protocol possibilities. Liz Wagstrom from the NPB commented on the importance of doing this work and hopes the NPB will fund the study.

3. The bacteriology/mycology QC guidelines were briefly discussed. The AAVLD will adopt the OIE standards. This may be an item to discuss through the bacteriology list-serve.

4. The fact that many members were dropped from the list-servs (both bacteriology and AAVLD) was brought to the attention of the committee. Members were advised to contact Jim Case (jtcase@ucdavis.edu) at UC Davis directly to solve the matter.
5. The committee thanked Karen Post for organizing the Bioterrorism workshop on Thursday co-sponsored by the National Laboratory Training Network. Among the speakers were Drs. B. Akey, L. A. Thomas, R. Levings, B. Martin, R. Kellogg, T. McEwain, H. Holmes, R. Meyer, L. Gjeltema, P. McCaskey and moderated by Dr. G. Songer. It was a well-received workshop, and very informative.

   a. During the last years' committee meeting the attendees were asked to submit comments on the protocols for identification of select agents that were compiled by subcommittee members to be submitted to the executive committee. These documents have not been finalized yet. In the absence of other guidance documents the select agents protocols on the CDC website can be used.

6. Dr. Glenn Songer presented the update from the anaerobic subcommittee. This consisted of updates on his latest findings regarding C. perfringens and C. difficile in several species. Dr. Songer emphasized that with C. perfringens fecal samples do not give you the isolate that is the culprit of the disease but a mix of C. perfringens types but when you sample the small intestine you find only one genetic type which is the responsible pathogen. C. difficile toxin presence and the intensity of the lesion present did not correlate. Dr. Songer was going to give a more extensive presentation during the Enteric Diseases Committee meeting.

7. There were no reports from the Mycology steering committee.

8. Bill Fales finished his tenure as co-chair (’04) and a motion for volunteers to serve as co-chairs was opened. Dr. Sreekumari Rajeev volunteered as there were no additional volunteers, the group agreed that she will be the next co-chair (’07).

Submitted by Susan Sanchez, co-chair ’06

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Antimicrobial Susceptibility Testing (AST) subcommittee report

Co-Chairs Dr C.C. Wu and Doreene Hyatt. The committee met from 1:00-2:00pm October 22, 2004 in Greensboro, NC
Number of attendees: 36

1. Update of new NCCLS documents and guidelines – presented by Dr. Wu included the following:
   
   Recently Published Documents (Publication Dates)
   M31-S1, Performance Standards for Antimicrobial Disk and Dilution Susceptibility Tests for Bacteria Isolated from Animals; Information Supplement (May 2004)
   M27-S1, Quality Control MIC Limits for Broth Microdilution; Informational Supplement (May 2004)
   M22-A3, Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard- Third Edition (June 2004)

   NCCLS name change. The proposed name, “Clinical and Laboratory Standards Institute”, upon membership approval will become effective January 1, 2005.

   QC Range for Tilmicosin for Enterococcus faecalis (ATCC 29212) is revised to 8-32 microgm/ml

   A ten-laboratory study to establish MIC QC ranges for broth microdilution testing of Campylobacter spp. was reported.

   The M31 will be revised in 2005 to incorporate changes from the recently published corresponding tables. All VAST documents will be made consistent with M2, M7, and M11. Any suggestions or comments regarding the improvement or correction of M31 should be submitted to NCCLS or wuc@purdue.edu as soon as possible to be included in the 2005 edition.

   The subcommittee working on campylobacter will review and address testing of H. somni, P. multocida, and M. haemolytica as well and ensure consistency between the fastidious VAST table and AST M45 fastidious or infrequently isolated organism document.

   Generic Working Group will propose breakpoints for E. coli and Salmonella for ampicillin with various species (e.g., bovine, canine, equine, and porcine) in January, 2005. Currently, we are using the human breakpoints (8/16/32). Any lab accumulated field data with appropriate QC records are encouraged to contact Dr. Ching Ching Wu at wuc@purdue.edu

2. New Business:
   New information coming from NCCLS has required reformulation of current susceptibility plates including Aquatic, campylobacter, anaerobic and fungal testing plates. Jenny Lorbach from Trek discussed the future design options.
Changes proposed included changes for bovine standard plate (drop apramycin and add danofloxacin [range 0.12-1.0]), avian plate (drop sarafloxacin and add florfenicol), companion/equine plate (lower ceftiofur range, drop spectinomycin and add marbofloxacin, drop lower sulfa well, and drop chloramphenicol and add cefpodoxime, drop cephalothin and add cephalexin).

Two of these were contentious and discussions centered on the dropping of chloramphenicol. Suggestions from the users were to drop sulfamethoxime but keep chloramphenicol. Additionally, concerns were lodged against dropping cephalothin which is a class drug for cephalosporin and replace it with cephalexin. Since the latter is used topically for dermatological infections, it may be better to use one strip instead. Trek agreed to check into this further before the changes are finalized. Users are encouraged to provide input as soon as possible to Jenny Lorbach before this is finalized.

Committee members discussed the need to conduct an Antimicrobial Susceptibility Panel survey which includes listing of antimicrobials on each panel the lab is using (including use description). If the lab is using Trek custom panels, it is necessary to provide panel design (drugs and concentrations)

1. Not necessary to list the panels if you are using Trek standard panels, just let us know that is what you use. If you are using Trek standard panels with specific suppressions please give suppression rules

Please forward electronically the panel designs to Doreene Hyatt (drhyatt@colostate.edu) or Ching Ching Wu (wuc@purdue.edu) and we will collate results for next years meeting☺.

General consensus of the group was that there was interest in having this information collated and available to all members. Any interested members will forward the information to the chairs for presentation at next year’s meeting.

c. Harmonization study for AST testing
   Systematic analysis of AST variation (based on manuscript Peterson et al., 2003 Micro. Drug Resistance)
   25 isolates of 4 organisms (E. coli, Salmonella, Staph. aureus, Enterococcus) with various resistance patterns

General consensus of the group was that most labs do not have funding to participate in a large-scale study (100 isolates). If funding were to become available, further discussion is welcome.

Emergency Preparedness Workgroup

Chair John Andrews.
The AAVLD Emergency Preparedness Workgroup met from 9:00-9:50 am on Friday, October 22, 2004 in Greensboro, NC.

Seven committee members and 23 guests were present and participated in the discussions, which centered on revisions to the document “Suggested Laboratory Guidelines for Animal Health Emergency Management”, development of a short checklist for laboratories to use to assess their Emergency Management plan, and a review of the document “A New Paradigm – Local/State Response” as presented by Dr. Patricia Blanchard.

Changes to the “Suggested Laboratory Guidelines” were minor and were primarily made to bring the document into alignment with changes in the OIE classification of diseases. The revised and updated document will be presented to the AAVLD Executive Board for approval.

One of last year’s directives was to convert the document into a checklist format that could be used by laboratories and their administrators and the State Veterinarian to assess the preparedness of a laboratory or laboratory system. This directive was addressed with the presentation of two versions of a “checklist”. The shorter version was accepted with minor modifications. This document will be circulated to committee members for further input and will accompany the revised “Suggested Laboratory Guidelines” to the AAVLD Executive Board for approval.

Dr. Pat Blanchard presented a document entitled “A New Paradigm – Local/State Response” which outlined some additional and slightly different concepts regarding the rapid local response for animal disease emergencies. It may be necessary for many of these concepts to be incorporated into the “Suggested Laboratory Guidelines” in the near future.

The leadership and membership on the committee was discussed as was future activities and goals. Incoming AAVLD President, Dr. Gary Osweiler is a current member of the committee and was present at the meeting for input. The consensus was that there is a continued need for the workgroup and the workgroup will likely continue. Further review and updating of the “Suggested Laboratory Guidelines” will be on the agenda next year if the AAVLD leadership chooses to continue the workgroup.

Enteric Diseases Committee
Escherichia coli can cause various syndromes in poultry including coli septicemia, coligranuloma, salpingitis, omphalitis, osteomyelitis, synovitis and cellulitis. However, the literature on E. coli as a cause of enteritis in poultry as well as in other species of birds is limited. Between 1989 and 2002, numerous cases of enteritis associated with attaching and effacing E. coli were diagnosed most often in turkeys, but also in chickens, pigeons, quail, partridges, pheasants, ducks, ostriches, parakeets, and finches. Most of these birds were young and had a history of diarrhea and increased mortality in the flock. Grossly, the intestines, including the ceca, were distended with watery frothy contents in most birds. E. coli was cultured from the intestine of many of these birds, and eae gene was demonstrated by PCR. All of the E. coli isolated were negative for heat labile and heat stable toxins, as well as shiga-like toxin and cytotoxic-cytolytic factors. Histopathology of the intestine revealed the attachment of Gram-negative bacilli to the tips of the villi, and transmission electron microscopy revealed intimate attachment of the bacteria to the enterocytes with effacement of the microvilli and formation of cup-like pedestals. Attaching and effacing E. coli should be considered as one of the causes of diarrhea and enteritis in avian species, especially in turkey poults.

Dr. J. Glenn Songer, Professor, Department of Veterinary Science and Microbiology, The University of Arizona, Tucson, AZ 85721 USA

**Topic: Things You’d Already Know About Clostridial Enteric Disease, If You’d Been Paying Attention.**

Clostridial enteric disease continues as a major problem in domestic animals. Clostridium perfringens type C disease affects neonates of many species, and is often related to failure to vaccinate or improper vaccine use. Diagnosis is straightforward, but requires bacteriologic culture and genotyping. Type A enteric disease occurs in many species, with consequences ranging from acute death to mild, near-subclinical symptoms which may affect productivity. Disease in calves occurs sporadically, but accounts for ~15% of enteritis in neonatal pigs. Changes in the poultry industry have contributed to re-emergence of necrotic enteritis, especially in broiler flocks. Results of recent work support our working hypothesis that specific strains of type A are gut pathogens in specific species, while others are adapted to a commensal lifestyle. Clostridium difficile remains a significant cause of neonatal enteritis in pigs, often manifesting as diarrhea and with lesions limited to the cecum and colon. The full range of syndromes has not been defined, in that affected piglets are not always diarrheic. Evidence suggests that pathogenesis is toxin mediated, although the specific roles of toxins A and B are not yet known. Competitive exclusion by nontoxicogenic strains may provide a means of prevention.

Linda S. Mansfield, Professor, Department of Microbiology and Molecular Genetics; 2Department of Large Animal Clinical Science, National Food Safety and Toxicology Center, Michigan State University, East Lansing, MI-48824

**Topic: The challenges of diagnosing multifactorial gastrointestinal disease**

Medical professionals, scientists and funding agencies predict the need for better diagnostics based on understanding that microbiological specimens from patients do not always predict the clinically relevant pathogens. Specifically, several microorganisms may be identified in a patient specimen, but not all may be contributing to the symptoms/clinical signs and disease process. Attribution is the hardest aspect of diagnosis. Koch’s postulates rely on 4 criteria for attribution: 1) Specific causative agent must be present in all cases of the disease, 2) Agent must be isolated from host & grown in pure culture, 3) When inoculated into susceptible host, must cause disease, and 4) Agent must be re-isolated from inoculated, diseased host. We now know that a multitude of other factors affect the ability of a microorganism to cause disease and must be taken into account when making a diagnosis. The size of the inoculum, presence or absence of disease producing genetically encoded virulence factors, quorum sensing with virulence determinants regulated at the genetic level in a cell density-dependent manner, presence of required substrates, synergism with other concomitant pathogens, antagonism, opportunism, the presence of harmful or helpful microorganisms in the microbiota of the gut, the ability to upregulate or downregulate host innate or adaptive immune responses are examples of factors determining the outcomes leading to disease or resistance. As we move to new diagnostics driven by bio- and agroterrorism, science-based interpretation remains important. Each putative pathogen must be considered individually with enhanced understanding of individual pathogenesis. Active areas for research will include understanding of pathogen-pathogen, and pathogen-commensal interactions, and the role of the microbiota in development of disease.
Dr. Glenn Songer, University of Arizona was nominated for Chairmanship of the Committee for next three years (2005-2007). The motion was seconded by Dr. Shri Singh.

Epidemiology Committee

Co-chairs: Mark Thurmond and François Elvinger.

The Epidemiology Committee met on Friday, October 22, 2004, from 10:00 a.m. to 12:00 noon. There were 42 attendees who signed in on the attendance sheet, of which 13 were committee members; 5 attendees requested membership on the committee. This report also includes the proceedings of a special session on validation on Saturday, October 23, 2004, from 8 to 9:30 p.m. at which 30 attendees signed in, of which 6 were committee members.

Following a general welcome to the meeting and introduction of all attendees, co-chair Elvinger presented the outcome of the resolution authored by members of this committee, and subsequently voted on by the Animal Health Information Systems Committee (joint USAHA/AAVLD), and passed by the House of Delegates in 2003, on Strategic Planning and Development of a National Animal Health Surveillance System (NAHSS; resolution was also passed by USAHA). The resolution requested that USDA:APHIS:VS establish a working group to establish a process and timetable for development of a strategic plan for national animal disease surveillance. Veterinary Services, under the leadership of Dr. Valerie Ragan, Assistant Deputy Administrator, put in place a National Animal Health Surveillance System (NAHSS) Steering Committee, which participated in, and has been overseeing the drafting of such a strategic plan by and with the National Surveillance Unit, led by Dr. Brian McCluskey. The draft of the plan has been reviewed by the Veterinary Services Management Team, and has been posted for general review at http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/naahs_strategic_plan_draft.pdf. Committee members were encouraged to provide comments and suggestions to Dr. McCluskey.

As Dr. McCluskey could not attend the meeting himself, co-chair Elvinger introduced the National Animal Health Surveillance System Strategic Plan and the National Surveillance Unit (NSU), located in Fort Collins, CO. The NSU was established in late 2003, and currently is in the process of hiring necessary staff to fulfill its mission, as described in the NAHSS Strategic Plan. The Strategic Plan is to provide the framework to set priorities and to create a roadmap for the transformation and design of future surveillance activities into the NAHSS to support greater protection of animal populations from endemic, emerging, and foreign animal diseases. Surveillance is to be comprehensive, coordinated, and integrated, and needs to mobilize and rely on all federal, state, and industry stakeholders. The Strategic Plan defines 4 major goals, including 1) Early detection and global risk surveillance of foreign animal diseases; and 2) of emerging diseases; 3) enhanced surveillance for current “program diseases”; and 4) monitoring and surveillance for diseases of major impact on production and marketing. Twelve objectives, and associated action items and target dates have been defined and fitted as warranted to the 4 goals. The NSU, which was recently regrouped with the National Animal Health Monitoring System (NAHMS) into the Center for National Animal Health Surveillance (CNAHS), is to assume the leadership role in design and implementation of the National Animal Health Surveillance System.

Co-chair Thurmond presented a brief overview of the European Union (EU) Foot and Mouth Disease (FMD) Commission’s research meeting held October, 2004, in Crete and how some of the activities may offer a model for laboratory foreign animal disease preparation and for U.S. diagnostic surveillance globally. Key points were the presence of impressive inter-EU laboratory collaboration currently in place to prepare for FMD vaccination and sero-surveillance, the need for aggressive isolate retrieval and determination of new strains of FMD virus emerging globally, and the need for methods of global risk surveillance.

A new topic of interest for the Epidemiology Committee emerged from a request of Dr. Liz Wagstrom from the National Pork Board, who asked for support in the design of sampling strategies for diagnostic laboratories to determine presence, prevalence, or incidence of Salmonella spp. colonization in swine. Committee members and co-chairs proposed to assemble a work group to respond to the request, and to determine resources necessary and appropriate to answer future requests for support of design of sampling strategies for specimens to be submitted to AAVLD laboratories. The organization of a workshop on sampling strategies for the 2005 Annual AAVLD meeting was proposed.

Special Committee Session on Validation, Saturday, October 23, 2004, 8-10 PM

Co-chair Thurmond presented an overview of the historical activities and progress made in promoting and providing education on validation, as well as the progress made through the efforts of Dr. Barb Martin and an ad hoc committee to begin developing guidelines for validation of diagnostic tests. The current status of the ENDV RRT-PCR assay validation packet, which was provided by Dr. Randall LeVings, was reviewed briefly by Dr. Thurmond. Discussion followed on four basic areas of validation of various assays: 1) the validation criteria, 2) the formal process by which validation is accomplished, 3) assessment of validation process and outcome, and 4) the process by which assays are approved for deployment.

Key points of the discussion were:

Validation criteria:
USDA validation criteria need to be compatible with OIE guidelines for validation. Resources need to be devoted to meet validation objectives, even though assays may need to be deployed before performance characteristics can be properly estimated. Some expressed concern that validation may be too onerous. It was noted that publication of assays in the scientific literature should not be a substitute for, or necessarily considered as evidence of, a proper assessment of an assay’s performance.

**Formal validation process:**
A plan to formalize the validation process is under development by USDA. A phased approach could be considered for validation, as appropriate and if necessary. Guidelines should be provided for submission of assays to the approval process.

**Assessment of validation data, processes, and outcome:**
Evaluation of validation processes, data, and outcomes should be transparent and involve outside, independent assessments. Assessment should address determination of whether minimal performance requirements of the assay have been met, including sensitivity, specificity, repeatability, and confidence levels. AAVLD and member laboratories should be formally involved in the process by which validation data are reviewed and evaluated.

**Process of approval of assays**
Licensing requirements do not address performance criteria assessed through validation processes; consequently, assay licensing and assay approval requirements need to be distinguished and defined separately. AAVLD and member laboratories should be formally involved in the process by which assays are approved for deployment.

**Action Items:**
1. Create a working group to:
   a. Address AAVLD and membership laboratory needs for design of diagnostic sampling strategies and systems.
   b. Plan for a diagnostic sampling workshop for the 2005 AAVLD meeting.
2. The committee voted and approved the following recommendation:
   The AAVLD and member laboratories should be formally involved in developing national assay validation criteria, assessing and evaluating validation data, and approving assays for deployment.

The following list contains the names of 2004 committee members (marked with *, n=11, of 17 current members), and those who desire to become committee members (n=12), who attended and signed in at this year’s committee meeting.

Akey Bruce *
Brown Linda
Bruntz Stan
Callahan Johnny
Carter Craig*
Case Jim*
Deng Ming
Elvinger Francois *
Evermann James
Gibbons-Burgener Suzanne*
Harrison Lenn
Heidel Jerry
Hietala Sharon *
Kenney Joan
Marshall Mary
Martin Barb *
McEwen Beverly *
Munoz-Zanzi Claudia *
Perez Andres
Salman Mo*
Thurmond Mark*
Wagstrom Elizabeth
Wills Robert

**Food Safety Committee**
Co-Chairs Hailue Kinde and Pat McDonough. The committee met from 6:30-8:30pm on October 21, 2004 with 20 persons attending. Eleven were committee members and the other nine were visitors. Seven of the nine visitors expressed a desire to be members.
Powerpoint presentation on The Food Emergency Response Network (FERN) by Dr. Patrick C. McCaskey, Executive Associate for Laboratory Services, USDA, FSIS, Athens, Georgia. The Mission of FERN is, as described by Dr. McCaskey to:

- Integrate the nation’s food-testing laboratories for the detection of threat agents in food at the local, state, and federal levels.
- Detection of biological, chemical, and radiological agents.

Dr. McCaskey outlined the Homeland Security Presidential Directive – HSPD-9: Defense of U.S. Agriculture and Food (1-30-04): The Directive states that DHS will ensure development of nationwide laboratory networks for food, veterinary, plant health, and water quality that integrate existing federal and state laboratory resources, are interconnected, and utilize standardized diagnostic protocols and procedures.

The Secretaries of Interior, Agriculture, Health and Human Services, and Administrator of EPA … shall build on and expand current monitoring and surveillance to: Develop robust, comprehensive, and fully coordinated surveillance and monitoring systems, including international information, for animal disease, plant disease, wildlife disease, food, public health, and water quality that provides early detection and awareness of disease, pest, or poisonous agents.

Under this Directive the FERN objectives are:

- Prevention – federal/state surveillance sampling programs
- Preparedness – strengthening lab capabilities/capacities
- Response – surge capacity
- Recovery – provide assurance to the consumer

He also described the organizational structure of FERN which consisted of the Steering Committee Members (several Federal and state agencies), The FERN National Program Office (FERN NPO) the Support Programs and the Regional Coordination centers. FERN has developed a training plan which includes both web-based and face-to-face training on methods, BSL-3 level laboratories, tour of FERN, etc. Recently FERN provided real time PCR training for *B. anthracis* and *Salmonella*. FERN also provides proficiency testing. He also talked about Method Development/Validation/Approvals, and Electronic communication for data exchange.

FERN is currently comprised of 82 laboratories (55 state, 4 veterinary diagnostic, 20 federal, 2 county and 1 city) representing 41 states that have satisfactorily completed FERN Laboratory Qualification Checklists. The future objectives of FERN are to expand the capabilities/capacities of the network laboratories, enhance communications, enhance food surveillance sampling, validate laboratory tests, conduct exercises, etc. Dr. McCaskey said the veterinary diagnostic laboratories have important roles in the event of food-related terrorism events since some labs are primary food testing labs for their states, have significant capability and capacity to handle animal tissues and experience with a variety of agents and expertise in toxicology. For complete presentation of Dr. McCaskey’s see AAVLD website committee reports Food Safety.

Dr. Patrick L. McDonough presented The Role of Veterinary Diagnostic Laboratories in the Food Safety System. Dr. McDonough said *Food safety* involves looking at the entire food chain (continuum) and assessing areas in which we can *intervene and prevent contamination/infection* of food production animals, poultry, seafood, and plants with zoonotic microbial pathogens (or chemical or radio nuclide). The continuum has the Farm-to-fork” or “Farm-to-table” concept, HACCP, pathogen load, Best Management Practices (BMP) and biosecurity of feed and water. Microbiological safety of foods is principally assured by:

- Education and training of food handlers and consumers
- Application of safe food production practices during production, processing, handling, distribution, storage, sale, preparation and use (retail level)
- Microbiological testing for the presence/absence of food-borne pathogens and toxins (all levels)
- Implementation of HACCP (or BMP’s….all levels)
- Control at the source (preharvest level)
- Production design and process control (harvest and processing levels).

**Food security:** The United States agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism. US agriculture and food systems are part of an extensive, open, interconnected, diverse, and complex structure providing potential targets for terrorist attack. We need to provide the best protection possible against an attack on the US’s agriculture and food system, which could have catastrophic health and economic effects.

**Opportunities for Veterinary Diagnostic Laboratories:** By combining the elements of Food Safety and Food Security and through networking and collaborative efforts the veterinary diagnostic laboratories can be major players in the food continuum in the areas of preharvest food safety, harvest/packing plant, post-harvest/retail areas. In the preharvest food safety area we can help through validation of Best Management Practices e.g. value of milk sock culture in herd surveillance for salmonellosis; assessing animal health status through spontaneous disease laboratory testing; support for biosecurity measures on farm; There are also new opportunities for AAVLD laboratories for networking and building collaborative efforts with our partners and stakeholders such as participation in NAHLN, LRN, FERN; Veterinary Sentinel Sites (antimicrobial resistance monitoring) for FDA-CDC-USDA NARMS; Veterinary PulseNet (PulseVet) – planned nationwide network and traceback to source. There are research based opportunities such as NIH sites for Foodborne and Water Diseases (FWD) Zoonoses Research Unit (national response network for national terrorism or other emergencies; coordinate efforts with FWD Microbiology Research Unit and Clinical Research Unit); support for herd/flock based (health) certification programs (e.g., NYSCHP, NPIP, EQAP’s).

Dr. Hailu Kinde has provided a presentation and abstract on the Role of Veterinary Diagnostic Laboratory in the Food Safety System. His presentation was focused on large outbreaks in California involving food animals and how the California Animal Health and Food System played a major role either in early detection or traceback investigation of the causative agent or toxic substance. In his
presentation he mentioned that the veterinary diagnostic laboratory is accustomed to a multi-discipline approach in defining diseases on a flock or herd basis. The laboratory staff is used to a high throughput during large disease outbreaks and it can easily accommodate situations that would facilitate sample processing and testing within a reasonable amount of time. The laboratory staff is adaptable to cross training and temporary relocation within a few days to another site in the face of a disease outbreak. The convenience of having a pathologist, microbiologist, an epidemiologist and toxicologist under one laboratory system will enhance the disease investigation effort and provides a rapid identification of the causative agent or toxic element for prompt reporting. One of the missions of CAHFSL is to provide laboratory support for the protection of the public from diseases common to humans and animals and ensure the safety of foods of animal origin. The laboratory serves as an “early warning system” to help protect the health of humans, livestock and poultry from animal diseases and deals with potential diseases or conditions at the farm level before they become a public health issue. These may include infectious agents or microbial toxins, naturally occurring toxic substances, or other chemical intoxications. The laboratory has been instrumental in the detection of food animal poisonings due to toxic substances such as phorate poisoning in dairy cattle, botulism, oleander and lead, all involving California dairy cattle, Blue-green algae toxicosis in heifers and selenium toxicity in pigs. As these cases appear, CAHFSL is responsible for notifying regulatory officials in a timely manner. Several recent examples in the area of food safety were presented to illustrate the roles and responsibilities of a veterinary diagnostic laboratory.

**Approved Methods List Survey:**
Dr. Kinde presented the result of the survey of the approved methods in Food Safety that are used currently in the AAV Laboratories. Only 2 laboratories responded to the survey and provided list of approved methods used in their respective laboratories. Members were encouraged to forward the methods they use in their laboratories. The members agreed to work in the future closely with the AAVLD Approved Methods Committee.

**Future Objectives of the committee**
The Committee agreed to develop a Mission Statement and seek approval from the Executive Committee.

**AAVLD Foundation Committee**
Chair Barb Powers. The committee met from 8:00-9:30pm on October 22, 2004 with fourteen in attendance.

Attendance: Pat Blanchard, Paige Carmichael, Anthony Gallina, Sharon Hietala, Lucky Pittman, Terry McElwain, Leon Thacker, Randall Lovell, Carlos Reggaardio, Gavin Meerdink, Donal OToole, Lenn Harrison, David Zeman, Barb Powers (chair)

Financial Report: Total assets = $97,439.89 ($63,556.97 in mutual funds and $33,882.41 in checking account) as of September 30, 2004

Email and dues resulted in contributions of $2,245 year-to-date. Need to increase individual and company donations to develop new programs such as veterinary student externships or graduate student scholarships. Do not wish to compromise sponsorships for the annual meeting (~$7,000 per meeting). Propose to have Vice-President and President-Elect become ex-officio members of Foundation, so that different types of industry sponsorships can be coordinated.

Plan to have a development expert meet with a subgroup of AAVLD Foundation Committee at summer AAVLD meting with AVMA to help design a master plan for private and corporate giving. Will ask for assistance from CVM fundraisers that usually met at the AVMA meeting. At the next annual AAVLD meeting, will meet with some corporate sponsors to assess their interest in the programs developed. Will consider a Foundation fund raising event, such as an auction of donated items during the President's reception at the next annual meeting.

**Government Relations Committee**
CoChairs: Drs. Bruce Akey and Willie Reed. The committee met from 3:30-5:30pm on October 23, 2004.

Eight Committee members met to discuss a variety of topic concerning the interface between the AAVLD and various federal agencies. Topics discussed included:

- **Department of Homeland Security (DHS)** – the AAVLD is currently seeking a designation of “Affiliate” status with the Food and Ag Sector Coordinating Council set up by DHS in order to formalize its relationship with the agency and industry. It may be advantageous to both DHS and AAVLD member labs for laboratory directors to seek security clearance. This will enable laboratory management to receive certain levels of information that may be germane to decisions on the triage of possible select agent samples as well as indicators of need to plan for changes in testing types or volume.
National Animal Health Network (NAHLN) – Additional funding for the development of the NAHLN system is expected but the level of funding is still uncertain and funds will likely be split again between animal and plant labs. Priorities for expansion of the pilot NAHLN labs will likely focus on better geographic coverage as well as expansion of diagnostic capabilities within the NAHLN, toxicology is one likely priority diagnostic area. Depending on the level of funding received, expansion may only target capabilities within the existing pilot labs, not adding new laboratories. The best hope of achieving full funding of the NAHLN to encompass all states would be the establishment of a dedicated budget line item within USDA. This is at the discretion of USDA to establish such an item. Alternatively, DHS could also become a source of NAHLN funding. It was recommended that the sitting Vice President of the National Assembly of State Livestock Health Officials (NASLHO) be added to the NAHLN Steering Committee and that an update on the NAHLN be presented at each NASLHO meeting. The NASLHO is composed of the 50 State Veterinarians.

Laboratory Response Network (LRN) – In order for additional Veterinary Diagnostic Laboratories to join the LRN (which is sponsored by the CDC) it would likely be necessary for CDC to earmark funding to assist in this effort. To join the LRN the Director of the State Public Health lab must request the laboratories entry. A draft of a letter that was used during the monkeypox outbreak to request such approval will be circulated to laboratory directors. It would also be beneficial for the AAVLD Executive Committee to visit CDC and enhance communications with them.

Agricultural Research Service (ARS) – Discussions centered around the mechanism ARS uses to select outside collaborators and the percentage of the ARS budget that is directed towards extramural research projects. It was felt that the current ARS process for selecting extramural research partners relied heavily on personal contacts with ARS researchers and that instead the process should routinely follow open solicitation practices.

Plum Island Animal Disease Center (PIADC) – There is concern over the competing priorities (ARS, APHIS and DHS) for use of the staff and facilities on the island. The CDC seems to be pushing for large animal space to be dedicated to zoonotic disease research projects. This raises the question of whether such zoonotic work should be carried out at PIADC at all or at a second, separate facility. It was reemphasized that the NAHLN labs are seen as the reserve or surge capacity for diagnostic services currently only available at the PIADC.

American Association of Veterinary Medical Colleges (AAVMC) – The AAVMC has announced it’s own initiative to acquire funding, possibly from DHS, to fund 3-4 regional BSL-3 equipped laboratories to support both research and diagnostics. This seems to be an unnecessary overlap with the NAHLN initiative and could dilute funding for the NAHLN. Representation from the NAHLN Steering Committee should contact the AAVMC and make them aware of this potential conflict and seek their support for the NAHLN. AAVMC also has put forth a proposal to support a manpower training and development program to create the staff that will be needed to both maintain and augment diagnostic laboratories in the future. The AAVLD should lend it’s support to this initiative.

USAHA Government Relations Committee Annual Meeting – The USAHA GRC meets annually in February in Washington, DC with representatives from all levels of the USDA as well as FDA and some members of Congress. The AAVLD Executive Committee and Chair of the AAVLD Government Relations Committee have been invited to join in this meeting for the last few years and the consensus is that it has been an extremely worthwhile meeting for AAVLD to have representation at. This is one of the best opportunities each year to engage in very direct talks with everyone from the level of the Secretary to the Administrator and Deputy Administrator level. Some discussion was held on whether a member of the AAVLD Strategic Planning Committee and perhaps at least one more member of the AAVLD Government Relations Committee should be added to the contingent. The President will be asked to consider this request and, if approved, to convey it to the USAHA for the 2005 meeting.

Informatics Committee and NAHLN IT Committees

Co-Chairs: Drs. Jim Case and Jay Kammerzell. The AAVLD Informatics Committee met from 1:00 to 4:45pm on October 22, 2004 with 17 members and 25 guests present.

Following introductions the status of LIMS within laboratories were briefly described. Most of the represented laboratories were either in the process of implementing a new LIMS system or were preparing requests for replacement. A few labs stated that their compelling reason for replacing their systems was to be able to support the NAHLN.

Hilary Jones and Kevin Razzaghi from Booz-Allen-Hamilton were introduced and they presented an overview of the NAHLN IT project from concept through pilot and to the current status. Discussion continued on the results of the pilot program, the experiences of the pilot labs in creation and validation of the HL7 messages used to communicate with the NAHLN repository and issues surrounding terminology needs.

There was extensive discussion on the System Requirements Specification for version 2.0 of the NAHLN, which described the more comprehensive NAHLN functions including the NAHLN results repository, the laboratory capability and capacity registry and the methods registry.
For information about the needs analysis and the V2 Software design specification, go to the NAHLN website— http://www.nahln.us click on member laboratories and login with user id and password of guest.

Jim Case and Mike Martin reviewed the specifics of the XML message structure that will be required for the NAHLN labs to transmit to the NAHLN repository. The fine points of automated messaging with an emphasis on maintaining both data integrity and data security were discussed. This was followed by a discussion on unique identifiers, with an emphasis on the ISO Object Identifier (OID) format. The newly designed identifier registry, developed by Randy Berghefer at Iowa State was communicated and potential NAHLN laboratories were encouraged to register at the site for the assignment of a root OID that they could use in their organizations.

Jim Case described some training resources for the NAHLN standards including the HL7 tri-annual working group meetings, the special HL7 training summits, the courses offered by the College of American Pathology for SNOMED and the LOINC training session being held in December.

Lastly, Hilary Jones distributed a technology readiness survey for each laboratory to fill out. The results of this survey will help to determine the readiness of each potential NAHLN participating laboratory to implement the NAHLN messaging and terminology standards. Dr. Case stated that all of the pilot laboratories would be happy to consult with new laboratories as they attempt to implement the NAHLN version 2 messaging structures. The estimated delivery date for the new software and implementation guides was 1st quarter, 2005

Laboratory Administrative Personnel and Management Committee

Chair Geraldine Jessup. There were 22 attendees over the two days of meetings.

**Attendees:**

Linda Hendrickson, Purdue Animal Disease Diagnostic Lab, W. Lafayette, IN  
Steve Vollmer, Purdue Animal Disease Diagnostic Lab, W. Lafayette, IN  
Grant Maxie, Animal Health Lab, Guelph, Ontario  
Owen Schroeder, Breathitt Vet Center, Hopkinsville, KY  
Ralph Cobb, Texas Veterinary Medical Diagnostic Lab, College Station, TX  
Jay Kammerzell, Colorado State Univ. Diagnostic Lab, Fort Collins, CO  
Jay Weidner, Washington Animal Disease Diagnostic Lab, Pullman, WA  
Kim Ramm, Diagnostic Center for Population and Animal Health, E. Lansing, MI  
Linda Hall, Diagnostic Center for Population and Animal Health, E. Lansing, MI  
Mary Finseth, North Dakota Veterinary Diagnostic Lab, Fargo, ND  
Katherine Hill, California Animal Health & Food Safety Lab, Davis, CA  
Emily Sanson, California Animal Health & Food Safety Lab, Davis, CA  
Geraldine Jessup, California Animal Health & Food Safety Lab, Davis, CA  
Jay Ross, California Animal Health & Food Safety Lab, Davis, CA  
Bob Reese, NY State Animal Health Diagnostic Lab, Ithaca, NY  
Marci Pederson, Nebraska Veterinary Diagnostic Lab, Lincoln, NE  
Jeanine Staller, Pennsylvania Veterinary Lab, Harrisburg, PA  
Joseph Kellum, Mississippi Veterinary Research & Diagnostic Lab, Jackson, MS  
Lori Van Maele, Diagnostic Center for Population and Animal Health, E. Lansing, MI  
Brady James, Texas Veterinary Medical Diagnostic Lab, College Station, TX  
Craig Carter, Texas Veterinary Medical Diagnostic Lab, College Station, TX  
John Enck, Pennsylvania Veterinary Lab, Harrisburg, PA

**Saturday, October 23, 2004 –**

Committee chair Geraldine Jessup called the meeting to order at 1:00pm

Jay Ross from the California Animal Health & Food Safety Lab System gave a presentation on Modernizing a LIMS System in which he talked about the process they went through in their LIMS System replacement project. He covered the background and status of the CAHFS LIMS, the reasons to modernize, building the business case, point of origin, requirements gathering, requirements gap analysis, cost and benefits collection, preparing your cost/benefit analysis, features of a modern LIMS, and benefits of a modern LIMS. The future CAHFS LIMS is a product called StarLIMS. They have acquired the system as a pilot for use in their BSE/TSE testing lab. It is a modern LIMS with a client/server environment and operates with any number of enterprise database systems on the back end.

Kim Ramm from the Diagnostic Center for Population and Animal Health at Michigan State University gave a presentation on Value Stream Mapping. Their laboratory is now in a new building and they will also be implementing a new computer system so they were going through a lot of changes. A consultant was hired to help evaluate their business processes and they decided to try Value Stream Mapping. Value stream is all the actions required to bring a product through the main flows essential to every product. It allows you
to see the entire process, identifies waste and sources of waste, provides a common language, questions current decisions that happen by default, links material and information flow, and gives you a qualitative description of how your facility should operate. Applying Value Stream Mapping to your organization reduces the risk of making isolated improvements without improving total system efficiency and effectiveness or the total value stream’s ability to provide client satisfaction. It also helps break down communication barriers and provides the basis for an implementation road map. Receiving was the first area of the laboratory they did value stream mapping on and they were successful in greatly reducing the number of process steps and were able to put more emphasis on accuracy and still got the samples processed quicker than before. They are now doing VSM for individual tests in the labs. They recommend doing areas together, i.e. ELISA tests, administration, inventory, etc. At DCPAH, a core group of people were trained for 2 days and core members now serve on each team.

Ralph Cobb from the Texas Veterinary Medical Diagnostic Laboratory gave a presentation on BSE program logistics. They just started doing BSE testing this year and had to identify lab space, buy equipment and hire technicians. They are notified the day the specimens are shipped by Fed Ex so they know what is coming in. They go to the Fed Ex office and pick up the samples and chain of custody is established. They have a separate receiving area for BSE samples. They scan the bar codes and duplicate bar codes are produced for the grinder vial and chain of custody log. The samples are logged into the TVMDL computer system and an ELISA test is run on the samples. Results need to be reported by the end of the day the sample is received. Results automatically go from the ELISA reader into the LIMS system and are e-mailed to USDA and the client. They are getting approximately 100 samples per day. The Washington and Colorado labs are running up to 400 samples per day. Ralph said they are using their LIMS system so they can get the report out and it is tied into the billing system. They use the submitter plant as the owner and the billing goes to USDA’s account. After testing, the samples are retained a minimum of 5 working days under lock and key in case retesting is requested by USDA. After that time, the samples are incinerated. Jay said at Washington, if they can’t identify obex, they don’t test. He has been working on the BSE project a lot and was able to get the NVSL 10-4 form changed to something that better meets the needs of the program. He said eventually they don’t even want to get the submission form because they don’t need the form to run the test.

Emily Sanson from the California Animal Health & Food Safety Lab System gave a presentation on The Process of Attaining ISO Accreditation in their Equine Drug Testing Laboratory. International accreditation for this lab was a goal from the start. A QC officer was hired in 2001 to oversee the quality system and prepare the lab for accreditation. The application for accreditation was logged in March 2004 and the site visit was June 7-9, 2004. ISO requires you are accredited to certain methods and tests. They submitted all tests they do and were accredited for all. When preparing for Accreditation you need to define the scope, document your laboratory’s policies and procedures, become familiar with appropriate accreditation requirements, perform a GAP analysis, perform internal audits and management reviews and submit the application for accreditation. There are 11 analysts in their Lab and the auditor was there for 3 days. To survive the site visit, you need to have all documentation readily available (SOPS, Quality manuals, etc.), prepare the analysts for the presence of the auditor, and take extensive notes during the process. The auditor will sit there and watch the technician perform the procedure. You have 30 days to respond to deficiencies and need to immediately define your action plan and do a Corrective Action Report for each deficiency. Lessons learned were to know the accreditation requirements and interpret them literally, consistency in training pays off, make sure to document everything, the implementing and documenting processes take time, and getting the certificate doesn’t mean that you’re done. Next Emily talked about the Diagnostic Lab Quality System. In 2003 AAVLD incorporated OIE standards into accreditation guidelines and will be required for AAVLD accreditation starting in 2007. They also wanted to develop a Quality System to maintain California Agriculture’s favorable trade status with international partners, get credit for what they are doing well, and identify weaknesses and implement changes to correct them.

Sunday, October 24, 2004
Jay Ross from the California Animal Health & Food Safety Lab System demonstrated how they are using StarLIMS to process cases in their BSE Laboratory. The program is set up to track the sample from the time it is received, put on the ELISA plate and results transferred from the ELISA plate reader to the LIMS system and reported out.

Laboratory Updates:
Owen Schroeder, Breathitt Veterinary Center: They have been implementing their QA/QC program. They were accredited this year. They received an $800,000.00 Biosecurity grant through their State Health Department to upgrade their Microbiology and Virology laboratories to BSL-3. They are now having problems transporting samples to those labs and restricting students and visitors in the labs. He attended an excellent Biosecurity course by Dr. Ellis at CSU and Dr. Ellis is doing a risk assessment for them.

Ralph Cobb, Texas Veterinary Medical Diagnostic Lab: They have a new poultry Diagnostic Lab in their East Texas facility. There are 2 BSL-3 Labs at Texas. They had an Avian Influenza outbreak this year and got geared up for the BSE testing. They also had their AAVLD site visit 2-3 weeks ago.

Mary Finseth, North Dakota Veterinary Diagnostic Lab: Working on QA/QC program. A Quality Control manager was hired. Biosecurity changes have been made this year with card key access added to laboratories. Not as many West Nile cases have been received this year.
John Enck, Pennsylvania State: He was the State Veterinarian and just started as Lab Director on October 1. They have 3 sites. They have a new LIMS system to tie the Labs together. They have cooperative agreements with USDA for testing, but they aren’t allowed to hire in Pennsylvania so they have had to hire a lot of temporary technicians.

Kim Ramm, Diagnostic Center for Population and Animal Health: At Michigan they are getting used to all being in one building. The TB testing is now being done by the State. Their Lab was testing 15,000-20,000 deer heads a year so they lost that revenue. They are still doing CWD testing.

Linda Hill, Diagnostic Center for Population and Animal Health: They are in the process of changing their LIMS system. They are also changing their disaster recovery plan since they are in one building now and before the server was in another building.

Jay Weidner, Washington Animal Disease Diagnostic Lab: He has been spending a lot of time working on the BSE project. QA/QC has also been consuming a lot of time. They had to do some BSL-3 conversions and security changes this year. British Columbia had an Avian Influenza outbreak this year that they were involved with.

Jeanine Staller, Pennsylvania Veterinary Laboratory: The Harrisburg Lab is awaiting for approval to start doing BSE testing in the next month or two. They are implementing a web based SOP system and want to start doing auditing. They got a new security system with card key access.

Joseph Kellum, Mississippi Veterinary Research & Diagnostic Laboratory: They are on schedule with their QA program implementation. It is a big project. Most of their SOPs need to be rewritten. They are building a new facility at one of their locations.

Grant Maxie, Animal Health Lab, University of Guelph: They started doing BSE testing. They are in the process of designing a new laboratory. They are putting out RFP for a new computer system. They want to update or replace VADDS. They have a 3-day full-scale simulation with the Avian Industry coming up. They plan to do this every year. You have to do it to make sure your system works.

Marci Pedersen, Nebraska Veterinary Diagnostic Lab: They are still under construction to over-haul their ventilation system and will be out of the building for 6 months. The Bacteriology and Virology Labs are on opposite ends of town and they have a courier to get the samples back and forth. Histology and Necropsy are the only labs in the building now. They have a site visit in April.

Bob Reese, Cornell Animal Health Diagnostic Lab: They are working on QA/QC. They are attempting to go live with a new computer system (UVIS) in April. BSE was a challenge to start up. They are working with the state to define a new lab that would bring all Labs under one roof. They worked with the University and all supervisors had to go through mandatory training 1 day a week for 4 weeks. Faculty are required to go through 2 days of training. There has been a marked decrease in issues coming to him.

Linda Hendrickson, Purdue Animal Disease Diagnostic Lab: They are getting ready for their accreditation visit next month. The Veterinary School was also accredited this year. Since the hurricanes damaged the Veterinary School in Granada, the Purdue Vet School is housing the entire sophomore class and instructors. The Diagnostic Lab is also being used.

Jay Kammerzell, Colorado Veterinary Diagnostic Lab: They are continuously upgrading their LIMS system. Last year was a big West Nile year, but not too much this year. The USDA has been working with Japan trying to lift the export ban and they have been doing several tours in CSU’s BSE Lab. They are going live with a web based SOP product and will implement it with their training. It will notify people when they need training and keep track of everyone’s training. He has also been spending a lot of time on the NAHLN program. They are getting BSE working and then will bring other tests on.

Linda Brown, Kentucky Livestock Disease Diagnostic Lab: She is the new QA Manager and has been there 4 months. They began BSE surveillance in September. They have a new epidemiologist and a new toxicology section leader. They are under the College of Ag. at the University and their facility is outdated so they are looking at an enhancement plan. They have installed key card access system and are looking at a document control system (Sharepoint).

Brady James & Craig Carter, Texas Veterinary Medical Diagnostic Lab: They are installing a new server and are integrating 2 poultry labs into the system and will also do the drug lab in the future. They are poised and ready for HL7. They cross-referenced all in house dictionaries to Snomed.

Kathy Hill, California Animal Health Food Systems: They are in the mitigation and surveillance phase of the END outbreak from last year and are not having as much success as hoped for. Avian Influenza and END testing is being done at No Charge, but compliance is not as anticipated. They set up for scrapie testing, but are not doing much as there are more labs performing the testing now. Geraldine and a group were able to go and visit BSE labs in Europe and that really helped when they were setting up their BSE Lab. It was a big challenge to get set up quickly. They received a $500,000.00 grant for Johne’s ELISA testing in California and have
tested 25,000 samples since May. There was a big rush in the beginning but it has slowed a lot. They received a small amount of funding from the Department of Health for West Nile testing which was pretty big this year. They have a Valley Lab project to take 3 older labs and convert to 2 new labs. They are having problems getting portions of one building converted to BSL-3. They have a very small space for doing BSE testing and are trying to lease a trailer to use. Everybody wants to do PCR testing. Luminex technologies has a method to do 100 assays on 1 sample. They are trying to find resources to pay for all the new PCR testing. Their faculty and supervisors have to do a training program that covers writing performance reviews, harassment, etc.

There was a short discussion on dangerous goods shipping. Cornell University was visited by the FAA. There were 9 violations at the University, most were because people’s training had lapsed. The fines were up to $30,000 per incident, but there were able to get them down to $250.00 per incident. Both Cornell and Michigan have a single point of control for shipping infectious substances. Two people need to sign off – supervisor and shipper. Some places have four signatures - the person who wants to ship, their supervisor or chair, and the trained packer and their supervisor. New UN transfer regulations are coming January 1, 2005.

Geraldine confirmed committee membership which is as follows: Geraldine Jessup, Chair; Ralph Cobb, Linda Hendrickson, Katherine Hill, Jay Kammerzell, Grant Maxie, Mary Finseth, Barbara Pickard, Kim Ramm, Owen Schroeder, Steve Vollmer, Jay Weidner, Jeannine Staller, Marci Pederson, Bob Reese, Dr. John Enck, Joseph Kellum, Roy Thompson, and Linda Brown.

The meeting was adjourned at 10:15 a.m.
Submitted by Mary Finseth

Laboratory Director’s Committee

Co-chairs Drs. Bev Byrum and Ron Lewis. The committee met Saturday October 23 5:30-8:00pm in Greensboro, NC. There were 50 attendees including Lab Directors and guests.

The following speakers provided timely updates of significant issues and disease programs:

Dr. John Clifford, Deputy Administrator, USDA/APHIS/VS provided an update regarding the progress of the National BSE Surveillance Program. He mentioned that personnel from 7 state labs have been trained, passed proficiency tests and are conducting BSE testing. Five additional labs will provide testing as the program evolves. Testing was initiated June 2004, with a goal of testing 200,000 to 268,000 samples within a 12-18 month time period. Dr. Clifford indicated that over 90,000 samples had been tested to date with only 2 inconclusive results. Dr. Clifford thanked the Lab Directors for the excellent work and support being provided to this important program.

Dr. William C. Wagner, Professor, Ohio State University and CRSEES administrator updated the Lab Directors regarding the National Animal Health Laboratory Network. He indicated that the NAHLN has expanded to include labs conducting testing under contract with USDA-APHIS-NVSL. Labs eligible to join the NAHLN will be provided by e-mail a qualification checklist. This list must be completed by the Lab Director and signed by the State Veterinarian and USDA-Area Veterinarian-in-Charge. Funding for the NAHLN has been included in the federal fiscal 2005 budget, with the final numbers yet to be determined.

Mr. Dennis Senne, Virologist, USDA/APHIS/NVSL, provided an excellent presentation on the Molecular Characterization and Strain Variation of Highly Pathogenic Avian Influenza in North America. Mr. Senne described the new OIE avian influenza classification scheme called ‘Notifiable Avian Influenza’. Three categories of notification for AI subtypes H5, H7 are 1) Highly pathogenic AI, IVPI of 1.25 or higher, 2) Highly pathogenic AI H5, H7 with compatible molecular sequence and 3) Low pathogenic H5, H7 strains. Mr. Senne anticipated these changes being adopted by the OIE in May 2005.

Dr. Ronald J. Lewis, Director, Animal Health Centre, British Columbia provided a description of the outbreak of Highly Pathogenic Avian Influenza in British Columbia. His presentation described how the outbreak evolved and included critical decisions which helped mitigate disease spread. His discussion included valuable “lessons learned” and recommendations beneficial to industry, regulatory agencies and labs in emergency preparedness and response.

Dr. Max Coats, Deputy Executive Director, Animal Health Programs provided a description of the Highly Pathogenic Avian Influenza in Texas. Dr. Coats mentioned the value of obtaining an early diagnosis and he discussed the cooperation of the Texas Animal Health Commission and the poultry industry in the maintaining the quarantine. Dr. Lelve Gayle, Executive Director of the Texas VMDL, discussed the initiation of a lab support network he developed in Texas as a result of this experience. This collaboration would provide lab surge capacity valuable for any future outbreak situations.

Dr. Jim Case, California Animal Health Lab & Food Safety Lab System provided an update on Progress Toward Standardization of Information Technology. Dr. Case described database system used by National Animal Health Laboratory Network labs. He mentioned the use of HL7 and SNOMED tools to provide a means for the original 12 Pilot NAHLN labs to enter data into the system. He suggested that expanding the NAHLN database to include additional labs could be followed using the same concepts.
Following the meeting, **Dr. Brian McCluskey**, USDA/CEAH presented a strategic plan for animal disease surveillance in the United States. The plan, the National Animal Health Surveillance System (NSS) has been developed by CEAH to provide a systems approach to monitoring emerging disease, domestic disease and foreign animal disease surveillance. A web site address was shared for Lab Directors desiring to obtain a copy of the plan: http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/index.htm

**Dr. Robert Sprowls** shared a position statement from the Academy of Veterinary Consultants regarding their recommendation that the dairy and beef industries adopt measures to control and target eventual eradication of bovine diarrhea virus infection from North America.

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**Laboratory Safety and Biological Waste Disposal Committee**

Chair: Larry Thompson. The committee met from 1:00- 4:30pm, October 24, 2003 in Greensboro, NC.

There were 38 members and guests in attendance. The Safety Committee continues its mission of fostering communication amongst member laboratories concerning on-going and emerging safety issues.

The first discussion focused on the 13th UN Model Regulations on the Transport of Dangerous Goods and the changes that will affect animal disease diagnostic laboratories. Infectious substances will be divided into Category A and Category B groups. A specific list of Category A organisms will be published with these organisms being the agents causing life threatening disease in animals or humans. Category B will be comprised of any infectious agent not in Category A. Category A infectious substances will require UN Part 620 packaging (equivalent to IATA 620 packaging) and a dangerous goods declaration. Category B infectious substances will require packaging similar to the current “Diagnostic Specimens” with the additional requirement that the primary or secondary container must be certified to withstand 95 kPa of pressure differential. This is equivalent to UN Part 650 packaging. Certain changes may be made in the current list of Category A agents, at the request of OIE, as reported by Dr. Jim Pearson. Most important of these would be the change in rabies virus listing to rabies (culture only) on the Category A list. This “culture only” designation would have a rabies suspect brain sent as a diagnostic specimen. Dr. Thompson will forward the list published by IATA to the committee and will update the committee on pending amendments. Although IATA regulations will be published soon and take effect on January 1, 2005 the US-DOT regulations will have a lag before implementation. Committee members are reminded that IATA changes only affect air travel while ground transportation regulations are covered by the US-DOT. The committee agreed that items sent by USPS should always be cleared by the USPS and Dr. Rick Nabors related his Texas experience and forwarded USPS contact names to confirm packaging requirements. A final item on the new regulations was that currently any sample from a healthy human or animal is exempt from the regulations. This exemption may be totally removed or may be changed to just healthy animals, as is needed for surveillance purposes.

The committee then had a short discussion of the CDC/USDA Select Agent registration. Most laboratories under CDC authority report fairly clear cut inspections and interpretations. Certain member laboratories report inconsistencies on the USDA side, probably related to changes in USDA personnel over a relatively short period of time.

The committee was updated on the status of the Best Management Practices for Chronic Wasting Disease and other non-zoonotic transmissible spongiform encephalopathies. This document was developed by the AAVLD Pathology Committee and the Lab Safety Committee last year. The document was accepted by the EPA. An update on the use of the Steris Corporation commercial product (LPH-environ) was given by the Wyoming and Colorado laboratories where it is used to decontaminate surfaces for prions. Section 18 exemptions have been granted to these states, but has lead to some confusion over the use of bleach and sodium hydroxide for the same purpose in these states. Currently the EPA seems to be mulling the situation over.

The final topic covered by the committee was a proposal to develop BMP for BSE in the diagnostic lab setting. After some discussion, the committee decided to place this as a major agenda item for the next meeting, with the committee chair agreeing to gather existing SOP’s to avoid reinventing the wheel.

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**QA Committee**

Chair: Dr. Monte Reimers. The committee met from 1:00pm-3:00pm on October 22, 2004 with 66 people in attendance. The meeting was chaired by Steve Vollmer of Purdue University.

Sixty-six (66) attendees were present, including several who indicated intention to become new members of the committee. Updated committee rosters will be distributed to all members.
The primary topic of discussion was the creation of the quality system at each laboratory. Review of submitted quality manuals and implementation plans by the Accreditation Committee is forthcoming, and will be utilized by committee members and member laboratories to guide future quality system activities.

Attendees from USDA FSIS (an ISO17025 certified lab system) offered a compact disc containing their quality documentation. This CD will be provided to Steve Vollmer and made available to committee members who request it.

A major point of emphasis from the group was the desire for training. The AAVLD annual meeting has been recognized as a good time for this training, as so many who seek training are gathered. This desire has been voiced by numerous members through various means for some time, and has been communicated to AAVLD. Committee members with sufficient experience to do at least some of the training have repeatedly volunteered their services. The committee will continue to seek authorization for such training, as many of its members have been assigned QA responsibility despite limited experience or training.

Ongoing support of QA personnel at all member laboratories continues to be an important offering. Members of the committee as well as all AAVLD members are welcome to contact any member for information, consultation, sample documents, or other assistance.

Pathology Committee

Chair: Dr. Donal O’Toole. The Pathology Committee met from 12:00 – 2:00 pm on October 24, 2004 with 29 individuals attending. The following indicated they wished to be on the pathology committee:
Donal O’Toole (chair, ’05), David Steffen, Tim Baszler, Flint Taylor, Larry Stuart, Matti Kiupel, Floyd Wilson, HL Shivaprasad, Pam Parnell, Lanny Pace, Paige Carmicheal, Linda Brown, Mark Hall, Scott Fitzgerald, Rob Bildfell, Sheila Grimes, Bill Layton, Claire Andreasen, Michael Yaeger

1. Review of Saturday afternoon slide conference session and selection of replacement chair for 2005. Dr. Tanya Graham, SDSU
Dr. Graham reviewed this year’s session. Twenty cases were presented, with two breaks, between 3:30 and 6:00 on October 2004. Presentations generally stayed within time. There was a discussion of whether to continue to send out slide boxes to institutions that do not have an employee presenting a case. Currently, 60 slide boxes go out. Costs are borne by institutions whose employees submit a case, which involves 60 slides/case submitted to the session chair. It was agreed that in future ONE slide box will go out to the institution of presenters, and ONE duplicate slide box will go to presenters IF they indicate this preference on their abstract. Remaining slide boxes will be advertised shortly before the annual meeting and brought to the meeting to be sold for $50 each, with money going to the Pathology Travel Scholarship (checks made out to AAVLD Foundation). Dr. Carol Lichtensteiger (clichten@uiuc.edu) will serve as conference co-chair with Dr. Rob Bildfell (Rob.Bildfell@oregonstate.edu) for the 2005 AAVLD meeting.

Action item: When Dr. Bildfell issues the call for cases in the 2005 meeting, he will ask presenters whether they want to get a personal set of slides, in addition to an institutional set. He will bring surplus sets to the AAVLD 2005 meeting to be sold to benefit the AAVLD Foundation (pathology travel scholarship).

2. Immunohistochemistry SOPs. Dr. Matti Kiupel MSU
Dr. Kiupel presented a two-page SOP document on standard operating procedures for immunohistochemistry. A longer document, Guidelines for Standardization of Diagnostic Immunohistochemistry in Veterinary Laboratories, was prepared by the AAVLD subcommittee on standardization of immunohistochemistry (edited by M Kiupel with contributions from T Baszler, L Bliven, B Broderson, B Chelack, S Czub, F Del Piero, S Dial, EJ Ehrhart, T Graham, L Manning, D Paulsen, J Ramos-Vara, and K West). This will be submitted for publication to JVDI.

Action items: 1. Dr. Kiupel will mail out an amended version of the two-page SOP document for comments and approval to the AAVLD subcommittee on standardization, and to members of the Pathology Committee before the end of 2004. 2. Dr. Kiupel and other members of the subcommittee will submit the Guidelines document for peer-review and publication to J Vet Diagn Invest within the next year.

3. Clinical Pathology subcommittee update. Dr. Claire Andreasen ISU
Dr. Andreasen gave an oral report on preliminary plans for the clinical pathology subcommittee of the Pathology committee. This subcommittee was formed after a request by Dr. Willie Reed, AAVLD President, that a member of AAVLD chair a clinical pathology subcommittee in the Pathology committee to address development of quality assurance and quality control documents for clinical pathology units related to AAVLD-accredited laboratories. Subcommittee members are: Drs. Karyn Bird, Ken Latimer, and Melinda Wilkerson, and Claire Andreasen, Chair. The ASVCP has developed QA/QC documents that are posted at http://www.asvcp.org/publications/qas-guidelinemenu.html

She alerted the committee to a survey that will be undertaken by AAVLD to establish how many laboratories have in-house clinical pathology units, with a request for the name of a contact in each laboratory’s clinical pathology service. The low
Co-Chair: Sandy Baldwin, The committee met from 4:00-6:00 pm Friday, October 22, 2004. There were 55 guests and 5 committee members in attendance.

1. Technical updates: Only one company presented technical data for a new commercial kit. Idexx gave a brief description on their blocking ELISA PRVgB antibody kit for review by the committee.

2. NVSL update: Beverly Schmitt presented a brief NVSL update on standardization of panels and reports for proficiency testing. NVSL is examining the feasibility of altering the distribution schedule of proficiency panels to the diagnostic laboratories.

3. Product updates: Only one commercial company gave a presentation on product developments. Idexx described their CWD and BSE ELISA kits, their avian pneumonitis antibody kit (European market), their light cycler PCR test for salmonella, their BVD antigen ELISA monoclonal ear notch arsenal, their BCV antigen capture ELISA, their Tecan adaption of the Johne’s ELISA, their SIV antigen ELISA and their Johne’s RT-PCR light cycler test.

4. Dr. David Miller presented data gathered by NVSL from the leptospirosis proficiency testing. Participants were reminded to use the USAHA leptospirosis guidelines and to dilute out to 1:102,400. Dr. Miller described the collection and packaging of the samples and how results were scored (5 points for correct identification, 0 for incorrect identification; 5 points for each correct titer, -1 point

5. Improved training and recruitment of veterinary diagnostic pathologists. Dr. D. O’Toole, UWy

The Association of American Veterinary Medical Colleges is working with USAHA and AAVLD to increase the supply of veterinarians engaged in “public health practice” in the United States. There was to be a meeting on 25th October chaired by Dr. Bennie Osburn (head of AAVMC) and Mr. Bob Frost (past president of USAHA) to discuss a draft documents, the Veterinary Medical Education and Workforce Development Act of 2004. This request to Congress is for $300 M in fiscal year 2005 and for unspecified funds in years 2006 – 2010. The critical shortage of diagnosticians in the fields of pathology, microbiology and toxicology, as well as diagnostic informatics and QA/QC personnel, was discussed.

Action item: If the AAVLD officers and Executive Board agree, the AAVLD will encourage the AAVMC and USAHA to earmark part of this congressional request for funds to increase the training of veterinary diagnosticians, particularly through fellowships in AAVLD-accredited laboratories, debt forgiveness for DVMs willing to pursue careers in diagnostic veterinary medicine, veterinary student travel scholarships to meetings such as AAVLD-USAHA, and externship programs in veterinary diagnostic laboratories.

Serology Committee

Co-Chair: Sandy Baldwin, The committee met from 4:00-6:00 pm Friday, October 22, 2004. There were 55 guests and 5 committee members in attendance.

1. Technical updates: Only one company presented technical data for a new commercial kit. Idexx gave a brief description on their blocking ELISA PRVgB antibody kit for review by the committee.

2. NVSL update: Beverly Schmitt presented a brief NVSL update on standardization of panels and reports for proficiency testing. NVSL is examining the feasibility of altering the distribution schedule of proficiency panels to the diagnostic laboratories.

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for each two-fold dilution away from the median titer. Ninety-five percent of the 42 (40 outside laboratories and 2 from NVSL) participating laboratories scored 95% or greater on identification and 50% were 99% or better. Forty five percent scored 95% or better on accuracy and 9.5% scored less than 90%. Finally, 71% scored 95% or better on both accuracy and identity. It was reiterated the test is not for certification and that laboratories are not passed or failed. Rather, it is to be used for maintaining competency, evaluate testing capabilities, monitor internal laboratory procedures and to improve competence in diagnostics - export and import testing.

5. Dr. David Miller also presented the information gathered by testing cattle sera against three different *Leptospira hardjo* genotypes. Current genotype utilized is *Lepto hardjo - prajitno* and this genotype was tested along with *Leptospira hardjo - bovis A and bovis B*. Two thousand four hundred thirty one bovine sera from all regions of the United States were tested. Sixty percent of the samples were negative for all three genotypes. Nine hundred fifty six were positive for at least one of the three genotypes. Fifteen were non reactive to *H. prajitno*. Eleven of these fifteen were positive for *H. bovis A* only, two for *H. bovis B* only, and two were positive for both *H. bovis A and B*. Three hundred ninety four were positive for *H. prajitno* only and if either *H. bovis A or bovis B* were used in the MAT test 50% of the Hardjo positive cases would have been missed. The conclusion by Dr. Miller was that the data does not support the suggestion that *H. bovis A or bovis B* is better than *H. prajitno* for determining Hardjo antibody in cattle sera.

6. Dr. Peter Wright presented the current status of OIE guidelines for test validation and certification of diagnostic assays for infectious animal diseases. His summary: Until now, the OIE has considered animal diseases mainly as it pertains to trade. Accordingly, it classifies animal disease diagnostic tests as prescribed or alternative tests. There are many other reasons for testing, including: serologic monitoring, demonstration of freedom from infection, estimation of prevalence of infection for risk assessment, etc. Therefore, test validation should be a process that will demonstrate fitness of that test for a particular use. The OIE has received requests from many member countries and also from commercial test manufacturers to provide clear guidelines and much broader recognition of diagnostic tests as fit for specific purposes, not only for trade.

To this end, the OIE in collaboration with the Joint FAO/IAEA Division of the IAEA has developed a framework whereby fitness for purpose is incorporated into test validation. Guidelines and a standard template are being established for the preparation of dossiers to be submitted to the OIE for test validation and certification. The OIE is presently establishing a Secretariat that will manage the evaluation process and a registry of those tests that have been successfully validated and certified. OIE Reference Laboratories will be intimately involved in the evaluation process and in the development of panels of reference materials that will facilitate uniform evaluation and comparison of test methods.

7. Following the formal meeting, the five committee members present met and discussed the future direction that the Serology Committee will take. Several items were brought forth. First, via input to and from the Approved Methods Committee, provide validation packets to assist in the accreditation process of AAVLD laboratories. Second, Drs. Jerry Saliki and Sandy Baldwin will update the Unique Serology Manual for distribution to the diagnostic laboratories. Third, the committee will attempt to develop and publish timely reviews on serologic interpretations for AAVLD members. Fourth, key speakers will be sought to give relevant serologic presentations that will assist the AAVLD at-large members. Finally, in an attempt to increase the number of committee members, the sign-up sheet that was distributed during the meeting asked for AAVLD members that would be interested to become members to signify that interest. That list of potential new members will be examined and names presented to the AAVLD president for approval.

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**AAVLD Veterinary Analytical Toxicology & Mycotoxins**
and **USAHA Environmental Residues Committee**

Co-chair: Brent Hoff. The committee met on Saturday, October 23, 2004 from 3:30-6:30pm with 36 people in attendance.

Present: Catherine Barr, Brent Hoff, Dwayne Hamar, Frank Galey, Michelle Mostom, Gene Niles, Birgit Pushner, John Reagor, George Rottinghaus, Nick Schrier, Wilson Rumbeiha, Larry Thompson, Randall Lovell, Robert Poppenga, Andreas Lehner, Elisabeth Tor, Emmett Braselton, Andrew Moore, Mike Filigenzi, C. Wilson, N. Wineland, G. Osweiler, Bob Everson, Ramesh Gupta, Steve Hooses, Anant Jain, W. Koller, Dan McGinnes, Gavin Meerdink, I. Gibson, Bev McEwen, M. Hazlet, L. Morrison. (36 participants)

Dr. Gavin Meerdink – USAHA representative gave a brief overview of origin and structure of committee.

Dr. Emmett Braselton addressed the group on the topic of **ICP-AES in the Diagnostic Laboratory**. He gave the history and the development of ICP-AES and explained the mechanics and function of the equipment. He explained how he was involved with early development and working objectives as well as the application to “real life”, using 19 elements that are significant. It became very apparent that quality control became very important for the various methods. Biopsies needed an ultrasonic nebulizer, especially for copper. Using this method a sample from a small True-cut biopsy can be processed (5mg).
A multi-element profile has been developed and this helps establish validity. There are unexpected consequences, such as ethylene glycol, cholecalciferol (Ca:P). Cold vapor is used for Hg and ICP. A method using iodine can be used to measure GFR, but there is some interference with Phosphorous. There are many further new developments in the works.

Dr. Randall Lovell presented information on dioxin levels in animal feeds. He first gave a review of TEQs of 17 Dioxin/ furan congeners and 3 PCB congeners. A summary of “Follow-up Cattle Investigations to a Recent USDA Survey was given. Also, “Follow-up Investigations to a Recent USDA Dioxin Survey” was presented.

Dr. Elisabeth Tor gave an outline on the development of various analysis and methodologies for algal toxins. Visual identification should be done on a fresh sample. There are several different methodologies and LC/MS is the most sensitive.

Mr. Andrew Moore’s presentation, entitled FT-IR/SEM – a useful tool in veterinary toxicology and forensic food science, included many screening procedures for veterinary toxicology. The presentation indicated how this instrumentation could be used to identify foreign material in foods and source material. This includes metals, drugs, crystals and plastics. The equipment is also used to confirm crystals and urolith composition in the Urolith Laboratory.

Dr. Mike Filagenzi gave a presentation entitled – Perchloride methodology (milk) (and regulations) by LC/MS/MS. Perchlorate disrupts thyroid hormone levels. Perchlorate is highly mobile in aqueous systems (stable compound). There are no federal standards. (EPA wants 1 ppb; NAS will set standards). To achieve detection limit and specificity, went to LC/MS. Difficult to find a negative milk sample.

A discussion on the levels of various mycotoxins around North America was conducted by Dr. Michelle Mostrum. Overall, not very high levels seen, with some exceptions in the central northwest.

Committee members:
Co-chair Brent Hoff 2006
Co-chair Catherine Barr 2007

One year term - Michelle Mostrum, Gene Niles, Wilson Rumbeiha, Robert Poppenga
Two year term - Mike Murphy, Birgit Puschner, Nick Schrier, George Rottinhaus
Three year term – Dwayne Hamar, Frank Galey, Larry Thompson, Andreas Lehner

Liaison:
AOAC - Frank Ross
FDA - Randall Lovell
ABVT – Bob Poppenga
AAVCT – Wilson Rumbeiha

Virology Committee

Co-chairs: David Benfield and Jim Evermann. The committee met from 1-4 pm on 21 October 2004 with 53 individuals in attendance.

1. Update development of PCR assays for detection of PRRSV in semen and other tissues. An update on the development and validation of a commercial "real time" PCR assay for the detection of PRRSV in semen, serum and other tissues of boars was discussed. This test has been in development through a collaborative effort of Tetracore, Inc, the South Dakota Animal Disease Research and Diagnostic Laboratory, and the Animal Disease Diagnostic Laboratory at the University of Nebraska-Lincoln. Jane Christopher-Hennings (SD) presented "Quantification of PRRSV in boar semen, serum and tissues". Most of the information presented has been published as Waslik et al; 2004:42:4435-3361. Highlights of her presentation included: 1) The commercial real time PCR offered by Tetracore, Inc is as sensitive as the nested RT-PCR, which has been the gold standard; 2) Semen and serum differ in viral load; 3) PRRSV can persist in lymphoid tissue of boars up to at least 96 dpi; 4) Peripheral gamma-interferon levels and neutralizing antibodies to PRRSV are detectable "late" in infection and do not correlate with the duration of virus detection in semen; 5) Mictotitration estimates of the quantity of infectious virus may underestimate the amount of infectious virus present in samples; 6) Copies/ml of viral RNA may overestimate the amount of virus present in samples; and 7) Biosecurity and eradication protocols in boar studs may require a highly sensitive test such as PCR to identify animals acutely or persistently infected with PRRSV.

Johnny Callahan, Tetracore, Inc provided an update of activities to develop, standardize and validate the VetAlert™RT-PCR for PRRSV ("An update on the Vet Alert™ RT-PCR reagents for the detection of U.S. and Lelystad or European-like porcine PRRS viruses"). He indicated that a commercial test has been developed, validated and is now being commercially produced in a cGMP facility. New goals for this assay include development of a commercial quantitative standard (in vitro PRRSV RNA transcripts) to use in a quantitative assay and to develop a multiplex RT-PCR assay to detect North American and European isolates in the same test. Tetracore, Inc has also applied for USDA/APHIS/CVB license for the VetAlert assay.
2. **Update from the National Veterinary Services Laboratory.** Bev Schmitt, Chief Diagnostic Virology Laboratory, NVSL, presented an update on activities: 1) BSE, U.S. first case, target is to screen 200,000 to 300,000 samples within 12-18 months, 7 laboratories are participating in this activity; 2) Implementation of training and proficiency testing for FMD, CSF and VS for laboratories in the NAHLN, Newcastle disease approved laboratories were rolled into NAHLN; 3) Master Plan for new laboratory facilities in progress; 4) Avian influenza outbreaks in DE/MD (LP H7N2), TX (HP H5N2; LP H7N3), WA surveillance for HP (H7N3), CT (LP H7N2). Increase in requested AGID reagents from NVSL; 5) Newcastle disease surveillance targeting backyard poultry and birds with 3,000 tested to date, goal is to test 30,000; 6) VSV outbreaks in TX, NM and CO. FADDL screened 233 samples, DVL 1,493 samples. Validated real time PCR assay for VSV; 7) Outbreak of spring viremia of carp/taura syndrome; 8) Developing BVDV proficiency panel; 9) EEE outbreak in Northeastern U.S.; 10) WNV cases decreased in horses this year except in AZ and CA; and 11) Evaluating EHV-1 PCR for brain tissue.

3. **Equine influenza in racing greyhounds.** Ed Dubovi gave a presentation entitled "Influenza virus infection in racing greyhounds with acute respiratory disease". Kennel cough syndrome epidemic in greyhounds in 1992, 1999 and 2003 was observed in several states. Disease was clinically characterized by fever, protracted coughing, and death. This resulted in a nationwide quarantine on dog movements and suspension of racing, a financial hardship to the industry. An outbreak involving 22 dogs in January 2004 in Florida. Morbidity was 100% with 8 deaths. Postmortem examination revealed extensive hemorrhage in lungs and pleural cavities of six dogs. All 6 dogs had bronchopneumonia and influenza virus was isolated. IHC on lung was also positive for H3 protein. Genetic and other characterization of the virus indicated similarity to H3N8 equine influenza. This isolate was designated A/canine/Florida/43/04.

4. **Companion animal diagnostics.** Jim Evermann reported for the small animal diagnostics subcommittee. Companion animal virology services and diagnostic needs of small animal veterinarians are being influenced by changes in vaccination protocols from annual to every 3 to 4 years. There are also more specialized commercial laboratories offering serology and virological services that are not offered by veterinary diagnostic laboratories. Discussion focused on: 1) The need for immune assessment profiling, that uses IgG titers as a measure of protective immunity; 2) Specialty laboratories for PCR and the use of PCR to determine if virus persists when not causing disease; 3) Surveillance and emerging infections. Monitoring for newly emerging infections of animals is an important role of diagnostic laboratories. Examples include WNV, equine influenza, respiratory syncytial virus and coronavirus in dogs and canine distemper virus in cats.

5. **Review of vesicular diseases.** Tom McKenna, USDA-APHIS, Plum Island gave an overview of "Vesicular diseases: Disease overview and discussion of economic importance". He discussed the similarities and differences between FMD, VS and SVD. There was also discussion on the impact these diseases could have on the U.S. export market of animal products. The economic impact would be substantial as agriculture is only 1/2 areas where US has a positive balance of trade. A recent suspected FMD outbreak in Kansas had significant impact on cattle futures, grain prices and stocks of several food and agriculture processors fell. Cost to the industry was estimated as $50 million all due to a suspected case. Information on the economic costs to the United Kingdom from the last FMD outbreak was also presented. Important points to remember related to vesicular diseases: 1) All are clinically similar; 2) Many domestic disease present with similar clinical signs; 3) Vesicular diseases can be distinguished only by laboratory testing; 4) Introduction of these diseases in U.S. will have significant economic effects; and 5) Producers, private practitioners, government veterinarians are the first line of defense for identifying the introduction of these diseases.

6. **Other committee business.** Jim Evermann discussed the new Pioneers in Virology award to be introduced and awarded at the 2005 Virology Committee meeting. Members on the Virology Committee will be solicited to vote for the recipient. Jim Evermann and Dave Benfield will seek funds for the award.

The quality control and PRRSV PCR working subcommittees have completed their assignments and are dissolved. The BVDV diagnostics (Ed Dubovi, Fernando Osorio, Jim Evermann, Jerry Saliki, Judith Ridpath) companion animal diagnostics (Jim Evermann) and molecular diagnostic (Ming Deng, Roger Maes, Steve Kleiboeker, Johnny Callahan, Dave Benfield, Robert Eisner) subcommittees will continue for next year. A nominee for co-chair to replace Dave Benfield in October 2005 will be recommended to the President of AAVLD.

There was also discussion on the need to determine how to archive various virus isolate collections that are being discarded due to retirement of many diagnostic virologists. Members of the committee are to provide ideas to the co-chairs as to how the committee might address this issue.