December 12, 2013

To: WSAVA Board

From: David Polzin and Larry Cowgill

Co-Chairs, WSAVA Renal Standardization Project
George Lees, Bill Spangler, and Astrid van Dongen
Members, Management Committee, WSAVA Renal Standardization Study
Cathy Brown, Pathology Study Group Representatives

Re: 2013 End-of-Year Project Progress Report - WSAVA Renal Standardization Study

This report will include 3 sections: 1) Achievements as linked to the specific aims of the project, 2) key successes of 2013, and 3) 2014-2015 Budget Proposal.

Section 1: The format of this section of this progress report is to link progress to each of the specific aims that were identified for this project. Comments on progress follow the statement of each aim.

Specific Achievements Linked to the Aims of the Project:

Aim 1: Establish two Diagnostic Renal Pathology Centers linked by a robust communication infrastructure that will provide participating pathologists and nephrologists with shared access to high-resolution digital micrographic images suitable for the diagnosis of glomerular diseases.

Current status: This aim was completed in the first year of the study and has remained in place since then. However, the status of this goal will change as of January 1, 2014. The final study cases were entered into the WSAVA RSP and digital images of the pathology were added to the electronic database by the end of June, 2013. As a consequence, the Aperio imaging system became unnecessary to complete the study.

Although the Aperio imaging system could potentially have continued to play an important role in providing additional digital images of renal biopsy slides for collaboration and education, it became no longer essential to create digital images for the specific purpose of completing the study. Continuing access to the Aperio server would have facilitated group evaluations and discussions of renal images, but closing of the renal pathology service at Texas A&M and lack of adequate financial support for another year of warranty on the Aperio ScanScope® necessitated the shut-down of the system at A&M at the end of December 2013. A “work-around” is being developed that will allow the WSAVA RSP pathology group to continue to review case images as we complete the final phases of the project. The work-around will involve providing all members of the WSAVA RSP with electronic files of all cases enrolled in the study. The images
can be viewed using Aperio Imagescope® and onferencing on the biopsy images will still be possible using Go-To-Meeting software.

From the outset, a key goal of the WSAVA RSP was to assure that veterinarians world-wide would have available one or more renal pathology services providing light, immunofluorescent, and electron microscopic tissue analysis and expertise. Although the WSAVA RSP has ended its role in providing a platform for processing and evaluation of canine renal biopsies, the renal pathology service at Texas A&M University will migrate to another location and continue to provide renal pathology service to veterinarians. Beginning January 1, 2014, processing and evaluation of canine renal biopsies will be provided to veterinarians through a fee-for-service renal pathology diagnostic group based primarily at The Ohio State University with collaborations through Texas A&M University. This service will be known as the “International Veterinary Renal Pathology Service (IVRPS)” and be provided through the efforts of Drs. Rachel Cianciollo (OSU), George Lees (TAMU), and Mary Nabity (TAMU). Drs. Cianciollo and Lees are members of the WSAVA RSP. The Utrecht renal pathology service continues to provide service to veterinarians in Europe under the guidance of Dr. Astrid van Dongen.

**Aim 2:** Perform comprehensive pathologic evaluations (including immunopathologic and electron microscopic, as well as light microscopic examinations) of renal biopsy specimens obtained from proteinuric dogs in which the clinical and clinicopathologic features of the disorder have been characterized. The results of an initial subset of these comprehensive pathologic and baseline clinical evaluations will be used to establish a semi-quantitative, lesion-based “prototype classification system” for canine glomerular disease. This “prototype classification system” will be subjected to additional prospective testing to include detailed clinicopathologic, therapeutic, and outcome criteria as Aim 3.

**Current status:** Development of the prototype classification system has been completed and the associated manuscript is nearing completion. It is expected to be submitted to Veterinary Pathology in March.

**Together – Aims 3 and 4:**

**Aim 3:** Correlate pathologic diagnoses with clinical and clinicopathologic data to identify particular patterns of findings that identify distinct canine glomerular disease entities that might be expected to have foreseeable outcomes or predictable responses to treatment. These correlations will be used to render a finalized (validated) morphologic and clinicopathologic classification scheme for canine glomerular disease that can be uniformly applied among veterinary pathologists and nephropathologists.

**Aim 4:** Prospectively gather information about the clinical course and outcome of disease in dogs with well-defined glomerular disorders, expecting that most dogs would receive standard care (i.e., be fed a “renal” diet and given an angiotensin converting enzyme inhibitor).
**Current status:** The clinical study group continues to develop and interpret the clinical database. Pathologic classification of cases not included in development of the prototype classification system will begin immediately after completion of the prototype manuscript is completed. Correlation of the clinical and pathology database is expected to be completed by the end of 2104.

**Section 2: Key Successes of 2013:**

1. Publications related to the projects: The first formal publications stemming directly from the WSAVA Renal Standardization Project were published in December (2013) in a supplement of the Journal of Veterinary Medicine (JVIM). The topic of this supplemental issue is canine glomerular disease including both renal pathology and medical issues. One of the goals in developing this supplemental issue was to prime the veterinary community's interest in glomerular disease and in particular interest in the importance of canine renal pathology and its clinical significance.


2. Final study case enrollment:

   a. Texas A&M center: 159 cases
   b. Utrecht center: 49 cases

**Section 3: 2014-2015 Budget Proposal – WSAVA RSP:**

Unofficial current study balance: 33,692.04.

The core budgetary priorities for completing the study are: 1) continue access to the study database for 2 more years, and 2) continue access to the online communication systems (Go-To-Meeting subscriptions). Distribution of the digital images to study group members will incur
some expenses, but the magnitude of these expenses are not yet known. They are expected to be within the remaining budget of the study.

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<th>Description</th>
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