



The Development of the Pfizer-Canine Comparative Oncology and Genomics Consortium Biospecimen Repository

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ABSTRACT

Comparative oncology is the study of naturally developing cancers in pet animals as models for human disease. An essential resource needed in the field of comparative oncology is the development of well-described repository of tissues from tumor bearing dogs that have naturally developed cancers that are not only major problems in the dog population, but which are also have comparative value in human cancer investigation. To this end the Canine Comparative Oncology and Genomics Consortium, a newly formed not-for-profit, has initiated a national biospecimen repository that has a goal of collecting tissues and fluids from 3,000 dogs with specific cancer types. Cancer specific goals include the collection of 600 samples each from dogs with lymphoma, osteosarcoma and melanoma and four other histologies (300 each) to be named. Universal and cancer specific standard operative procedures have been defined for the collections. A caBIG compliant web-based relational data-base has been implemented to track sample collection and shipment from 7 institutional collection sites across the United States, to describe sample characteristics and clinical annotation of pet dog patients, and to allow review of bank assets. The operating model developed for the CCOGC Biospecimen Repository is based on a population phase that requires \$2.2 million of start up funds. The repository includes a perpetual support model for the bank based on a nominal fee applied to tissue requests and for the use of the banking infrastructure to prospective collect samples not on the planned collection lists. This canine cancer repository may also provide opportunities to "test" best practices for future use in human biospecimen repositories. This bank has included investment and participation by the Pfizer, the Morris Animal Foundation, The American Kennel Club Canine Health Foundation and The National Cancer Institute.

BACKGROUND

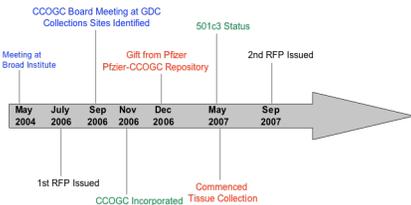
•Founded as a Maryland based Not - for - Profit (501c) in 2006

•Utilize the release of the Canine Genomics Project to characterize cancers in companion dogs using modern descriptors

•Provide a forum for discussion and sharing resources and reagents

•Guide the development of novel technologies that can be used to complement the study and appropriate use of canine cancers in the study of biology and therapy

CCOGC Milestones



Partnerships: Academia, Industry, Foundation, Government

REPOSITORY GOALS

- Focused on specific cancers important to the field
- Centrally housed with multiple contributors
- Populated with prospectively collected tissues and fluids
- Samples progressively annotated with robust parallel clinical data-base
- Managed through a web-enabled entry and retrieval port
- Initial collection on cancers of interest and value to Animal Health and Comparative Oncology (Human Oncology):
 - Osteosarcoma (600 Patients)
 - Lymphoma (600 Patients)
 - Melanoma (600 Patients)
 - Soft Tissue Sarcoma (300 Patients)
 - Hemangiosarcoma (300 Patients)
 - Transitional Cell Carcinoma (300 Patients)
 - Mast Cell Tumor (300 Patients)
- Collection period of 3 years

STANDARD OPERATING PROCEDURES

- SOPs developed by Bank Committee
- Reviewed and modified quarterly
- Structure:
 - Universal SOP apply to all histologies
 - Background
 - Criteria for Specimen Banking
 - Submission of Whole Blood, Serum, Plasma and Urine
 - Specimen labeling and shipping instructions
 - Histology specific SOPs are attached as appendices
 - Inclusion Criteria
 - Frozen tumor & normal specimen collection
 - Formalin tumor & normal specimen collection

COLLECTION SITES

The following criteria have been established to define eligibility for tissue collection sites for the CCOGC:

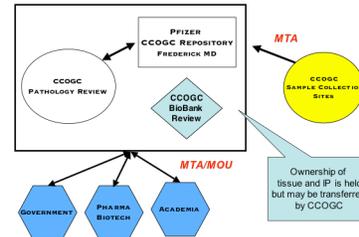
1. Dedicated Medical Oncology Service with two or more Medical Oncologists
2. Dedicated Surgical Oncology Service with two or more Surgical Oncologists
3. Pathology services with 52 week coverage
4. Experience with tissue archiving
5. Experience with clinical trials
6. Professional support of all of the above
7. Caseload suited for target tumors



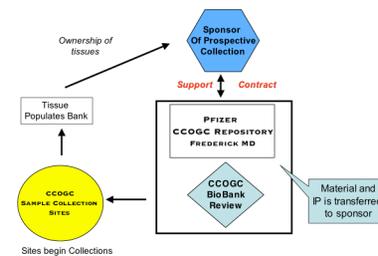
FUNDING MODEL

- One time start-up costs \$2.1 million
 - Physical infrastructure
 - Database development and management
 - Sample collection (3000 patients)
 - Quality and assurance
- Revenue streams for sustainability
 - Requests for samples/data from fixed sample resource
 - Prospective requests using CCOGC infrastructure
- \$1.1 million GIFT FROM PFIZER Inc.
 - Naming Rights
 - Access to tissues following SAB review at Not-for-profit rates
 - Credits provided on all CCOGC materials
 - Credits provided on all CCOGC Biospecimen repository publications
 - Early access to prospective collection requests
- \$500,000 GIFT from Morris Animal Foundation and American Kennel Club - Canine Health Foundation
 - Credits provided on all CCOGC materials
 - Credits provided on all CCOGC Biospecimen repository publications
 - Non-voting representation on CCOGC SAB
- \$500,000
 - Remaining

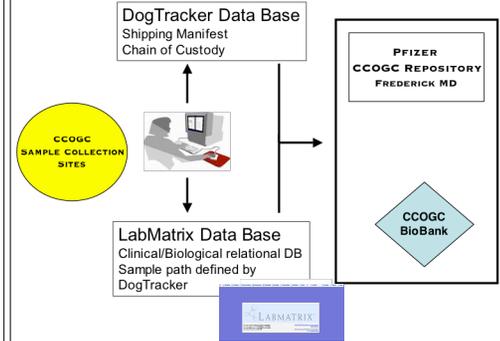
REQUESTS FOR SAMPLES/DATA FROM FIXED SAMPLE RESOURCES



PROSPECTIVE TISSUE COLLECTION MODEL



SAMPLE AND PATIENT DATA BASE



CCOGC DogBank Tissue Tracker:

- Data entry at collection site
- Captures patient's clinical and specimen information

Labmatrix:

- CaBIG compliant, secure, web accessible clinical and biological relational database
- Allows query of sample data by patient and histology
- Provides QA of samples collected

PHYSICAL INFRASTRUCUTRE

Wedgewood Repository, Frederick MD
Fisher Bioservices



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