



Veterinary Medical Diagnostic Laboratory  
College of Veterinary Medicine  
University of Missouri – Columbia, MO  
1-800-UMC-VMDL (1-800-862-8635)  
Fax: 1-573-882-1411  
[www.cvm.missouri.edu/vmdl](http://www.cvm.missouri.edu/vmdl)



**Summary List of Services & Fees  
(Effective July 15, 2008)**

**Basic VMDL Policies:**

- An 18% surcharge will be added to all accessions received from outside of Missouri.
- Please call the VMDL for pricing of custom procedures and research proposals.
- Prices subject to change without notice.
- Results can be reported by E-mail, fax or U.S. mail.
- By submitting diagnostic specimens to us, clients are considered to have agreed to VMDL testing procedures and policies, including billing.
- It is the shipper's responsibility to make sure that diagnostic specimens are packaged according to current shipping rules and regulations.

Submit all laboratory samples to one of the following addresses:

**Post Office Mailing Address**

Veterinary Medical Diagnostic Lab  
P.O. Box 6023  
Columbia, MO 65205

**Street Delivery Address**

Veterinary Medical Diagnostic Lab  
1600 E. Rollins (UPS, FedEx, etc)  
Columbia, MO 65211

**For FedEx Overnight Delivery** call the VMDL **1-800-862-8635** to obtain information about submitting specimens for overnight delivery at a reduced cost. We will preprint FedEx forms with our account information on it and send to you. The shipping costs will be added to your account upon receipt of delivery. Please arrange shipping so specimens arrive between **8 am – 5 p.m., Monday – Friday**. No one is available to accept packages over the weekend. If a particular test is not listed, call **1-800-UMC-VMDL** to obtain information regarding availability, pricing, sample submission and packaging required.

**Referral Service:** There are a few tests that are not performed routinely by our lab. Samples received requesting such tests will automatically be forwarded to an appropriate lab for processing. We will attempt to refer samples to laboratories that are reliable, rapid, and as inexpensive as possible. If a test is not listed in this fee schedule please call to see if the test is available and, if not, where it will be sent. A handling fee of \$10.00 will be added for submitting specimens to other referral laboratories, in addition to the actual mailing costs incurred and test charges.

**Specimens for rabies testing** can only be submitted to the Missouri State Public Health Laboratory. Contact your local health department regarding proper submission of the specimen, or go to <http://www.dhss.mo.gov/Lab/Virology/RabiesTesting.html> for additional information.

**Turn Around Time:** Working days after sample is received (Working Days=M-F, Day=24 hours).

**MU** **VMDL** a full service AAVLD accredited  
**Veterinary Medical Diagnostic Laboratory**

**Questions:**

**Call our Faculty for a consultation.**



**Alex Bermudez**  
*Director, VMDL  
Avian Pathology*



**Gayle Johnson**  
*Assoc. Director and  
Pathology  
Section Leader*



**William Fales**  
*Bacteriology  
Section Leader*



**Tom Reilly**  
*Bacteriology*



**Audrey Rottinghaus**  
*Serology  
Section Leader*



**Susan Schommer**  
*Virology and  
Molecular Biology  
Section Leader*



**Dae-Young Kim**  
*Pathology and  
Histopathology  
Section Leader*



**Jeff Mitchell**  
*Pathology*



**Larry Thornburg**  
*Pathology*



**Dan Shaw**  
*Pathology and  
Avian Pathology  
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**Fred Williams III**  
*Pathology*



**Kei Kuroki**  
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**Marlyn Whitney**  
*Clinical Pathology  
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**Linda Berent**  
*Clinical Pathology  
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**Chuck Wiedmeyer**  
*Clinical Pathology*



**Tim Evans**  
*Toxicology  
Section Leader*



**Stan Casteel**  
*Toxicology*



**George Rottinghaus**  
*Chemistry*

**1-800-862-8635**

## Collection and Preparation of Specimens

**Necropsy:** Live, sick, untreated animals that show typical clinical signs, along with dead animals that have not undergone decomposition or treatment, are the specimens of choice. Dead animals should be necropsied as soon as possible after death. If size permits, animals should be refrigerated until necropsied. The owner should be encouraged to bring animals to the laboratory when the veterinarian cannot. Submission of more than one animal, when possible, will increase the chances of a rapid, accurate diagnosis.

**Specimens:** When the whole animal cannot be brought to the laboratory, properly collected and preserved specimens may be helpful in arriving at a diagnosis. Careful selection of specimens representative of the suspected disease process, as well as a good history, are very important.

**Submission Forms:** Contact the lab for submission forms. Filling out forms correctly can make the difference between an accurate or inaccurate diagnosis. The laboratory worker is under the handicap of never having seen cases with which you may have become very familiar. Carefully written histories promote meaningful diagnoses. **If a zoonotic disease, such as rabies, is suspected, please indicate on the submission form so the specimen can be handled properly and unnecessary exposure can be avoided.**

**Labeling Specimens:** Clearly mark your name and the owner's name on each container. Proper identification eliminates the possibility of a specimen becoming separated from its submission form or being switched with another specimen. **Please clearly mark specimens that are suspected of being hazardous to human health, i.e., rabies, mycoses, anthrax, brucellosis, leptospirosis, etc.**

**Histopathology:** Sections of most tissues should be no thicker than 1/4 inch (6 mm) and should include lesional and normal tissue when possible. Brain is best submitted without sectioning or with coronal sections at 1-2 inch intervals. Spinal cord may be submitted intact (with the dura mater opened) or in segments at least 1 inch in length. Intestine should be submitted in segments 1-2 inches in length. Lymph nodes should be sectioned once in the sagittal plane. Large masses should be incised. Do not use narrow mouthed containers.

**Mycology:** Skin scrapings, hair, crusts or scabs should be placed in a sterile, **dry**, screw-capped tube. When a deep or systemic fungus infection is suspected, specimens should be collected and transported in the same manner as bacteriology samples. Tissues and body fluids are preferred over swabs.

**Bacteriology:** Specimens collected for isolation and identification of infectious agents need to be fresh, collected as aseptically as possible, and transported to the laboratory as rapidly as possible under refrigeration (ice packs). For bacterial isolation, culturette swabs should be used. BBL Port-A-Cul tubes or Remel's Act I with anaerobic transport media are recommended by anaerobic culture.

**Clinical Pathology: CBCs:** Freshly made smears should be submitted along with EDTA-anticoagulated whole blood. Slides submitted for cytological evaluations should be protected from Formalin fumes. Plastic slide holders are preferred over cardboard mailers with proper packaging. Blood, fluids and feces should be shipped on ice to arrive the day after collection. Personal delivery of the animal or specimens to the laboratory by the owner or veterinarian is best. **Chemistries:** Serum or plasma should be separated from the cells and submitted in a separate tube, even if serum separator tubes are used. Separate serum or plasma within 1 hour of collection. **Aspirates, imprints, and smears:** Fluids may be submitted (in EDTA tubes), but direct or sedimentation smears should always accompany the fluid. All smears should be air-dried, unfixed, and kept as dust-free as possible. Smears of bone marrow aspirates should be accompanied by current CBC results, or, preferably, by fresh smears and EDTA-anticoagulated blood

collected simultaneously with the bone marrow aspirate. If you have questions regarding the collection and submission of correct samples specifically for clinical pathology, please call the Clinical Pathology Laboratory (573-882-3338) for assistance.

**Immunohistochemistry:** Follow the general rules for histopathology. Adequate fixation is critical for immunohistochemical stains; autolyzed tissues usually give unexpected results. Fix tissues for 24-48 hours in 10% neutral buffered formalin solution. Indicate the time and date samples were put in fixative. Please indicate if fixative other than formalin is used. For additional information or a list of immunohistochemical tests available, please see our web site.

**Molecular Diagnostics:** Specimens for PCR/RT-PCR assays should be fresh and submitted as aseptically as possible. Tissues, swabs, feces and fluids are acceptable specimens. If whole blood is submitted, use the anticoagulant EDTA. Due to the sensitivity of these assays, care must be taken during sample collection to minimize cross-contamination between specimens. Transport specimens under refrigeration (ice packs).

**Parasitology:** Fecal samples should be refrigerated during shipment. If there is a delay, they can be shipped in 10% formalin. Parasites, external and internal, can be fixed and submitted in 70% ethyl alcohol; skin scraping may be submitted in a closed glass bottle.

**Serology:** Clear sera should be submitted for testing. If blood is collected in a red top tube, please separate serum from clot before submitting, or use a gel separator and separate the serum from the clot before submitting.

**Toxicology:** Tissue samples (50-100 grams of liver, kidney, fat or other tissues; vomitus, crop, stomach, rumen or intestinal contents (50-500 grams, depending on animal species); ½ brain sectioned longitudinally from animals NOT suspected of having rabies or other zoonotic diseases) and body fluids (50-100 mL of urine; 5 to 10 mL of whole blood or serum; 5-10 mL of aqueous humor or all available ocular fluid) should be placed in individual, clearly marked containers. Tissue samples and vomitus, crop, stomach, rumen or intestinal contents should be frozen. Fluids should be refrigerated for most analyses; ocular fluid and serum samples to be analyzed for ammonia should be sent frozen. Feed samples (250-450 grams; ½-1 pound) should be kept dry in plastic or, ideally, paper bags. Plants submitted for poisonous plant identification should be placed in plastic bags with a wet paper towel for preservation; plant material submitted for cyanide/prussic acid analysis should be frozen immediately following collection. Water samples submitted for the identification of blue-green algae should be diluted with an equal volume of neutral buffered formalin. Blood or serum samples to be analyzed for zinc should be sent in royal blue-topped trace element vacutainer tubes. All fluids and tissues should be in secondary containers. Please call 800-862-8635 and ask to be directed to the Toxicology Section if there are any questions not answered in the toxicology portion of the price list (pages 13-14), regarding the types of samples to be collected for the diagnosis of specific intoxications. Turn around times might be longer with multiple samples.

**Virology:** Specimens collected for isolation and identification of infectious agents need to be fresh, collected as aseptically as possible, and transported to the laboratory as rapidly as possible under refrigeration (ice packs). For viral examination, tissues, swabs, or liquid samples may be submitted. Specimens should be placed in a sterile container and double-bagged to prevent leakage and contamination. Viral transport media is available through the lab.

## AVIAN PATHOLOGY

Test Description	Price	Turn Around Time
Avian fresh or fixed tissue exam including Bacteriology, Histopathology, Serology, Virology, (excludes Toxicology)	\$95.00	3-5 working days
Avian fungal culture (litter)	\$22.00	Up to 3 weeks
Avian Gross Necropsy only	\$38.00	2 working days
Avian Histopathology only (Biopsy or mailed in tissue, per case, up to 5 slides. (An additional \$5 per slide will be charged over 5 slides)	\$46.00	3-5 working days
Avian influenza (AGID)	\$2.20	2-3 working days
Avian Mycoplasma culture	\$22.00	Up to 3 weeks
Avian Necropsy including Histopathology	\$52.00	3-5 working days
Avian Necropsy including Histopathology, Serology, Virology, Bacteriology (excludes Toxicology)	\$92.00	7 working days
ELISA Serology - Chicken (IBV, NDV, MG, AE)	\$1.50	3-4 working days
ELISA Serology - Turkey (Bordetella, HE, NDV)	\$1.50	3-4 working days
Hemorrhagic enteritis (AGID)	\$2.20	2-3 working days
Infectious bronchitis (HI) serology (Mass & Conn)	\$3.00	2-3 working days
Mammalian Mycoplasma isolation	\$22.00	Up to 3 weeks
Mycoplasma (HI) serology (MG, MS, MM)	\$2.20	1-2 working days
Mycoplasma rapid plate test (MG, MS, MM)	\$2.20	1-2 working days
Newcastle disease virus (HI) serology	\$2.20	1-2 working days
Ornithobacterium rhinotracheale (ORT) rapid plate test	\$2.20	1-2 working days
Salmonella pullorum rapid plate test	\$2.20	1-2 working days
Salmonella pullorum tube agglutination test	\$2.20	1-2 working days
Salmonella typhimurium tube agglutination test	\$2.20	1-2 working days

## BACTERIOLOGY

Test Description	Price	Turn Around Time
Abortion screen	\$33.25	8 working days
Aerobic bacterial culture (except blood) isolation and identification	\$19.50	2 working days
Anaerobic bacterial culture	\$19.50	4 working days
Antimicrobial susceptibility test per organism	\$21.00	2 working days
Blood cultures	\$27.75	8 working days
Enteric Screen (bovine, canine or porcine)	\$38.50	3 working days

## BACTERIOLOGY (continued)

Test Description	Price	Turn Around Time
FA screen for Clostridium spp	\$29.75	2 working days
Fungal culture	\$19.50	30 working days
Joint aspirate cultures	\$27.75	8 working days
Johne's culture	\$27.75	60 working days
Johne's culture PCR confirmation (referral)	\$27.75	2 working days
Mastitis susceptibility test per organism	\$10.50	2 working days
Microscopic examination of specimen (acid fast stain, dark field, phase, etc.)	\$9.75	1 working day
Ophthalmology antimicrobial susceptibility panel per organism	\$9.75	2 working days
Urolith sample preparation	\$10.25	n/a

## CLINICAL PATHOLOGY: CHEMISTRY PROFILES (Serum or Lithium Heparinized plasma only, no whole blood, 1 ml)

Test Description	Price	Turn Around Time
Avian Maxi Profile (Alb, AST, Ca, CK, TP, Uric Acid, Glob, Gluc, ALP, ALT, GGT, Creat, Un, Phos, tCO2, Na, K, Cl, An.Gap)	\$27.75	1 working day
Avian Mini Profile (Alb, AST, Ca, TP, Uric Acid, Glob, Gluc, GGT)	\$16.25	1 working day
Chem 6 Profile (Glu, Creat, Na, K, Cl, UN)	\$13.25	1 working day
Equine Maxi Profile (Alb, An.Gap, AST, T.Bili, D.Bili, Ca, tCO2, Cl, CK, Creat, GGT, Glob, Gluc, Phos, K, TP, Na, UN, Trig)	\$27.75	1 working day
Equine Mini Profile (Alb, Ca, Cl, CK, Creat, GGT, Glob, Gluc, Phos, K, TP, Na, UN, tCO2)	\$19.00	1 working day
Food Animal Maxi Profile (Alb, An.Gap, AST, T.Bili, D.Bili, Ca, tCO2, Cl, CK, Creat, GGT, Glob, Gluc, Mg, Phos, K, TP, Na, UN)	\$27.75	1 working day
Food Animal Mini Profile (Alb, Ca, Cl, CK, Creat, GGT, Glob, Mg, Phos, K, TP, Na, UN)	\$19.00	1 working day
Large Animal Liver Profile (Alb, AST, T.Bili, D.Bili, GGT, Glob, TP, Cholesterol)	\$13.75	1 working day
Renal Panel (UN, Creat, Phos, Na, K, Cl, Alb)	\$15.75	1 working day
Small Animal Liver Profile (Alb, ALP, ALT, T.Bili, D.Bili, Glob, TP, Chol)	\$16.25	1 working day
Small Animal Maxi Panel (Alb, ALP, ALT, TP, Chol, T.Bili, TCO2, Cl, Glob, Phos, K, TP, Na, UN, Ca, Creat, Gluc, GGT)	\$22.00	1 working day
Small Animal Mini Panel (Alb, ALP, ALT, Ca, Gluc, Glob, Phos, TP, Na, UN, K)	\$19.00	1 working day

## CLINICAL PATHOLOGY: INDIVIDUAL CHEMISTRY TESTS (Serum or Lithium Heparinized Plasma only, no whole blood, 0.5 ml for 6 chemistries or less, 1 ml for 7 or more)

Test Description	Price	Turn Around Time
ACTH Stimulation - 2 Samples	\$50.75	2-5 working days

**CLINICAL PATHOLOGY: INDIVIDUAL CHEMISTRY TESTS (continued)****(Serum or Lithium Heparinized Plasma only, no whole blood, 0.5 ml for 6 chemistries or less, 1 ml for 7 or more)**

Test Description	Price	Turn Around Time
Albumin	\$4.00	1 working day
ALP	\$4.00	1 working day
ALT	\$4.00	1 working day
AST	\$4.00	1 working day
Bile Acid - Pre & Post Sample	\$37.00	1 working day
Bile Acid - Single	\$18.50	1 working day
Bilirubin, Direct	\$4.00	1 working day
Bilirubin, Total	\$4.00	1 working day
BUN	\$4.00	1 working day
Calcium	\$4.00	1 working day
CK	\$4.00	1 working day
Chloride	\$4.00	1 working day
Cholesterol	\$4.00	1 working day
Cortisol	\$38.00	2-5 working days
Creatinine	\$4.00	1 working day
Dexamethasone Suppression - 2 Samples	\$50.75	2-5 working days
Dexamethasone Suppression - 3 Samples	\$64.75	2-5 working days
Foal IgG Snap Test	\$24.00	1 working day
GGT	\$4.00	1 working day
Glucose	\$4.00	1 working day
Magnesium	\$4.00	1 working day
Osmolality (measured)	\$15.25	1 working day
Phosphorus, Inorganic	\$4.00	1 working day
Potassium	\$4.00	1 working day
Protein, Total	\$4.00	1 working day
Sodium	\$4.00	1 working day
T4 - Small Animal Only	\$25.00	2-5 working days
tCO2	\$4.00	1 working day
Triglyceride	\$4.00	1 working day
TSH - Canine Only	\$35.00	2-5 working days
Uric Acid	\$4.00	1 working day

## CLINICAL PATHOLOGY: HEMATOLOGY & COAGULATION

**(EDTA for Hematology - minimum volume is 1/2 of total tube draw; NaCitrate for Coagulation - Full Tube)**

Test Description	Price	Turn Around Time
Activated Partial Thromboplastin Time (APTT) (contact lab)	\$13.25	1 working day
Automated Cell Count (CBC without slide review)	\$9.25	1 working day
Blood Smear Exam (slide)	\$11.25	1 working day
Bone Marrow Evaluation (cytologic)	\$38.50	1 working day
Buffy Coat	\$22.00	1 working day
CBC (includes slide review)	\$14.25	1 working day
CBC, Large Animal (includes slide review and fibrinogen)	\$18.50	1 working day
Coombs' (Direct)	\$22.00	1 working day
FDP Fibrinogen Degradation Products (contact lab)	\$16.25	1 working day
Fibrinogen	\$4.00	1 working day
Knott's Test (Microfilaria)	\$11.25	1 working day
Platelet Count (contact lab)	\$7.00	1 working day
Prothrombin Time (PT) (contact lab)	\$13.25	1 working day
Reticulocyte Count	\$8.00	1 working day

## CLINICAL PATHOLOGY: URINALYSIS

**(5-10 ml)**

Test Description	Price	Turn Around Time
Creatinine	\$4.00	1 working day
Osmolality (measured)	\$15.25	1 working day
Protein Quantitative	\$4.00	1 working day
Urinalysis – (complete; contact lab)	\$13.25	1 working day
Urinalysis – (physical/chemical)	\$8.00	1 working day

## CLINICAL PATHOLOGY: FECAL

Test Description	Price	Turn Around Time
Clostridium Difficile Toxin A & B	\$49.75	1 working day
Cryptosporidia Exam	\$13.25	1 working day
Direct Fecal Smear	\$8.00	1 working day

### CLINICAL PATHOLOGY: FECAL *(continued)*

Test Description	Price	Turn Around Time
Fecal Flotation	\$11.25	1 working day
Occult Blood	\$5.00	1 working day

### CLINICAL PATHOLOGY: CYTOLOGY AND FLUID ANALYSIS (slides and fluids)

Test Description	Price	Turn Around Time
Bone Marrow Aspirate	\$38.50	1 working day
Bone Marrow Core (contact lab)	\$45.75	3-5 working days
CSF Analysis (contact lab)	\$38.50	1 working day
Cytological Examination (tissue or fluid)	\$27.75	1 working day
Peritoneal/Pleural Fluid Analysis (Color, Transparency, TNCC, Sp. Gr., T.P., PCV, Cytologic Exam)	\$33.25	1 working day
Synovial Fluid Analysis (Color, Transparency, TNCC, Sp. Gr., T.P., Mucin Clot, Cytologic Exam)	\$33.25	1 working day

### PCR: SINGLE ASSAY TESTS

**(EDTA whole blood, CNS fluid, swabs, tissues from necropsy for most samples, except as noted)**

Test Description	Price	Turn Around Time
Avian Influenza	\$27.00	2-3 working days
Avian Influenza H5/H7	\$27.00	2-3 working days
Avian Paramyxovirus	\$27.00	2-3 working days
Bluetongue	\$27.00	2-3 working days
Bluetongue and Epizootic hemorrhagic disease (EHDV)	\$37.50	2-3 working days
Bovine Coronavirus	\$27.00	2-3 working days
Bovine leukosis (EDTA whole blood)	\$27.00	2-3 working days
Bovine parainfluenza virus (PI3)	\$27.00	2-3 working days
Bovine respiratory syncytial virus (BRSV)	\$27.00	2-3 working days
Bovine viral diarrhea virus (BVDV)	\$27.00	2-3 working days
Brachyspira spp.	\$27.00	2-3 working days
Canine adenovirus	\$27.00	2-3 working days
Canine coronavirus	\$27.00	2-3 working days
Canine distemper virus	\$27.00	2-3 working days

**PCR: SINGLE ASSAY TESTS (continued)**  
**(EDTA whole blood, CNS fluid, swabs, tissues from necropsy for most samples, except as noted)**

Test Description	Price	Turn Around Time
Chlamydia psittaci	\$27.00	2-3 working days
Ehrlichia spp.	\$27.00	2-3 working days
Eastern equine encephalitis (EEE)	\$27.00	2-3 working days
Equine herpesvirus 1 & 4	\$27.00	2-3 working days
Equine viral arteritis (EVA)	\$27.00	2-3 working days
Feline herpesvirus	\$27.00	2-3 working days
Feline infectious peritonitis virus/feline enteric coronavirus (FIPV,FeCV)	\$27.00	2-3 working days
Feline panleukopenia	\$27.00	2-3 working days
Haemophilus parasuis (lung samples from necropsy)	\$27.00	2-3 working days
Herpesvirus (detects most alpha-, beta- and gammaherpes viruses)	\$27.00	2-3 working days
Infectious bovine rhinotracheitis virus	\$27.00	2-3 working days
Influenza A (swine, equine, canine, avian)	\$27.00	2-3 working days
Influenza H1 & H3	\$27.00	2-3 working days
Lawsonia intracellularis	\$27.00	2-3 working days
Mycoplasma spp.	\$27.00	2-3 working days
Mycoplasma bovis	\$27.00	2-3 working days
Mycoplasma bovoculi	\$27.00	2-3 working days
Mycoplasma gallisepticum	\$27.00	2-3 working days
Mycoplasma haemofelis (Feline infectious anaemia and haemollama)	\$27.00	2-3 working days
Mycoplasma hyopneumoniae	\$27.00	2-3 working days
Mycoplasma meleagridis	\$27.00	2-3 working days
Mycoplasma synoviae	\$27.00	2-3 working days
Parvovirus (feline panleukopenia virus, canine parvovirus, porcine parvovirus)	\$27.00	2-3 working days
Pathogenic Leptospira spp.	\$27.00	2-3 working days
Porcine circovirus 2 (PCV)	\$26.75	2-3 working days
Porcine reproductive and respiratory syndrome virus (PRRSV) - real time PCR differentiates North American and European Strains	\$26.75	2-3 working days
Rotavirus group A (mammalian and avian)	\$27.00	3-4 working days
Salmonella spp.	\$27.00	2-3 working days
Toxoplasma	\$27.00	2-3 working days
Transmissible gastroenteritis virus (TGEV)/Porcine respiratory coronavirus	\$27.00	2-3 working days
West Nile Virus -mammalian, avian	\$27.00	3-4 working days

## PCR: PANELS

Test Description	Price	Turn Around Time
Bovine Enteric: Bovine coronavirus (BCV), Rotavirus group A and C, Bovine viral diarrhea virus (BVDV)	\$50.00	3-4 working days
Bovine Respiratory: Bovine viral diarrhea virus (BVDV), Bovine respiratory syncytial virus (BRSV), Parainfluenza type 3 (PI3), Infectious bovine rhinotracheitis virus (IBR), Mycoplasma bovis	\$60.00	2-3 working days
Canine Respiratory: Canine distemper virus, Influenza A, Canine adenovirus	\$45.00	3-4 working days
Porcine Respiratory: Porcine reproductive & respiratory syndrome virus (PRRSV), Influenza A, porcine circovirus type 2, Mycoplasma hyopneumoniae	\$50.00	3-4 working days
Salmonella spp. Lawsonia intracellularis, Brachyspira spp.	\$40.00	2-3 working days
Tick panel (detects Ehrlichia spp., Rickettsia spp. and Borrelia burgdorferi) (EDTA blood)	\$40.00	3-4 working days

## PCR: VIRAL STRAIN

Test Description	Price	Turn Around Time
Porcine reproductive and respiratory sequencing analysis including report and dendogram	\$92.75	1-3 weeks
Viral Strain Typing Nucleotide Sequencing of PCR product	\$42.00	10-14 working days

## VIROLOGY

Test Description	Price	Turn Around Time
BVD Herd Screen/Serum antigen detection (serum)	\$5.25	2-4 working days
Electron microscopy - negative stain (feces, lesion scrapes)	\$18.00	4-7 working days
Fluorescent antibody examination (necropsy samples, lesion scrapes, whole blood)	\$13.00	2-4 working days
Indirect Fluorescent antibody Feline Leukemia virus (bone marrow aspirate, whole blood, spleen)	\$19.50	2-4 working days
Virus isolation in cell culture (necropsy samples, swabs, whole blood, serum, scrapes)	\$22.00	10-14 working days

## PATHOLOGY

Test Description	Price	Turn Around Time
Biopsy (may include up to 3 IHC as determined by pathologist; routine special stains included)	\$46.00	3-5 working days or less; longer with special stains or IHC
BVD Immunohistochemistry (submit ear notch in 10% buffered Formalin) up to 6 animals per slide	\$28.00	3-5 working days
Chronic Wasting Disease (CWD) Testing – Brain will be submitted to NVSL for testing	\$22.00	Procedure done day of receipt, sent to reference lab

## PATHOLOGY *(continued)*

Test Description	Price	Turn Around Time
Cosmetic necropsy (charged in addition to the regular necropsy fee)	\$170.00	Procedure with necropsy
Food animal abortion Panel Fixed tissues: <ul style="list-style-type: none"> <li>• Liver, lung, kidney, heart, spleen, brain, skeletal muscle, placenta if at all possible. Can submit other organs as needed.</li> </ul> Fetal fluid: peritoneal, pericardial, thoracic (pooled): <ul style="list-style-type: none"> <li>• Serology for BVD, Neospora, Leptospira</li> </ul> Refrigerated lung, placenta, spleen/thymus/kidney/liver and stomach fluid: <ul style="list-style-type: none"> <li>• Abortion screen aerobic culture of 2 of the following: placenta, lung, liver, and stomach contents. Limit 2 susceptibilities</li> <li>• Bovine: BVD, Leptospira, IBR</li> <li>• Porcine: Leptospira, PRRS, Paravovirus, PCV-2</li> </ul>	\$95.00	4 working days
Food animal diarrhea panel for fecal samples (20 grams) Feces: <ul style="list-style-type: none"> <li>• Aerobic bacterial culture (for E. coli and Salmonella sp.) seperately for up to 3 animals. Limit 2 susceptibilities</li> <li>• Cryptosporidial smears (bovine only under 2 weeks of age), each animal</li> <li>• Fecal floatation--all seperate</li> <li>• Pooled examination for viruses</li> </ul>	\$75.00	3 working days
Food animal diarrhea panel for tissue samples Fixed tissues: <ul style="list-style-type: none"> <li>• Specimens of abomasum and large and small intestine; can submit other organs as needed</li> </ul> Feces: <ul style="list-style-type: none"> <li>• Individual animal fecal floatation</li> <li>• Cryptosporidial smear (bovine only under 2 weeks of age)</li> <li>• Both tests done on individual specimens</li> </ul> Refrigerated small and large intestine: <ul style="list-style-type: none"> <li>• Calves: BVD, bovine coronavirus, rotavirus</li> <li>• Young pigs: TGE, rotavirus</li> <li>• Salmonella PCR if indicated (antimicrobials were administered)</li> <li>• Anaerobic culture: SI for Clostridium perfringens</li> <li>• Aerobic bacterial culture: SI for E. Coli; Liver and LI for Salmonella spp.</li> <li>• Limit 2 susceptibilities</li> </ul>	\$95.00	4 working days

## PATHOLOGY (continued)

Test Description	Price	Turn Around Time
Food animal respiratory disease panel Fixed tissues: • Lung with obvious pneumonia and adjacent less affected tissue. Can also submit other organs Refrigerated tissues: • Aerobic bacterial culture of lung; nasal swabs if atrophic rhinitis is suspected in pigs. Limit 2 susceptibilities per case. Refrigerated lung and lymph nodes: • Bovine: BVD, BRSV, PI3, IBR • Porcine: PRRS, Circovirus, Influenza, Mycoplasma	\$95.00	4 working days
Fresh or Fixed Tissue Exam including all necessary lab testing (excludes Toxicology, cases with more than 5 tissues may be split into multiple cases)	\$95.00	After conclusion of testing; at 5 working days report with histo
Gross Necropsy Exam (up to 3 animals or 6 fetuses)	\$38.00	2 working days
Immunohistochemistry (per slide)	\$22.00	n/a
Large animal spinal exam (charged in addition to the regular necropsy fee)	\$55.00	Procedure with necropsy
Multi-system disease investigations of multiple etiologies and general animal health surveys	\$165.00	After conclusion of testing
Necropsy Exam including Histopathology (up to 3 animals or 6 fetuses)	\$52.00	7 working days
Necropsy Exam including all necessary lab tests, except Toxicology. (limit of 2 susceptibilities per accession)	\$92.00	After conclusion of testing; at 7 working days report with histo
Rabies Test – Brain will be submitted to Jefferson City Lab for testing	\$22.00	Procedure done day of receipt, result times vary; usually 2 working days

## SEROLOGY (1 ml serum, red top or separator tube)

Test Description	Price	Turn Around Time
Anaplasma phagocytophilia	\$19.00	1-2 working days
Anaplasmosis (ELISA)	\$5.25	3-7 working days
Aspergillosis (AGID)	\$6.25	1 working day
Blastomycosis (AGID)	\$6.25	1 working day
Bluetongue ELISA	\$6.25	1-5 working days
Bovine Leukosis ELISA	\$5.25	1-5 working days
Bovine Respiratory Syncytial Virus (BRSV), (SN)	\$6.25	5-7 working days
Brucella abortus (Card) (in conjunction with Pseudorabies)	\$0.00	1 working day
Brucella abortus (Card) (without Pseudorabies)	\$1.00	1 working day
Brucella canis	\$10.75	1 working day
BVD (SN)	\$6.25	4-7 working days

**SEROLOGY (continued)**  
**(1 ml serum, red top or separator tube)**

<b>Test Description</b>	<b>Price</b>	<b>Turn Around Time</b>
Canine Distemper IgG (IFA)	\$19.00	1-2 working days
Canine Distemper IgM (IFA)	\$19.00	1-2 working days
Canine Heartworm (ELISA)	\$6.25	1 working day
Canine parvovirus IgG	\$19.00	1-2 working days
Canine parvovirus IgM	\$19.00	1-2 working days
Caprine Arthritis Encephalitis (CAE) (AGID)	\$4.25	1 working day
Coccidiomycosis (AGID)	\$6.25	1 working day
Cryptococcus Antibody (Tube Agglutination)	\$10.75	1-2 working days
Cryptococcus Antigen (LA)	\$6.25	1 working day
EIA (ELISA or AGID)	\$5.25	1 working day
Ehrlichia canis (IFA)	\$19.00	1-2 working days
Ehrlichia risticii (IFA)	\$19.00	1-2 working days
Epizootic Hemorrhagic Disease Virus (EHDV) (AGID)	\$4.25	1-2 working days
Equine Rhinopneumonitis (SN)	\$6.25	4-7 working days
Equine Viral Arteritis (SN)	\$6.25	4-7 working days
Feline Heartworm Antibody (ELISA)	\$19.00	1 working day
Feline Infectious Peritonitis (FIP) (IFA)	\$19.00	1-2 working days
Feline Immunodeficiency Virus (ELISA)	\$19.00	1 working day
Feline Leukemia Virus (FeLV) (ELISA)	\$19.00	1 working day
Histoplasmosis (AGID)	\$6.25	1 working day
Infectious Bovine Rhinotracheitis (IBR) (SN)	\$6.25	4-7 working days
Johne's (ELISA)	\$5.25	1-5 working days
Leptospirosis - 6 Serovars (MA)	\$6.25	1-5 working days
Lyme Disease (IFA)	\$19.00	1-2 working days
Mycoplasma hyopneumoniae (ELISA)	\$5.25	1-5 working days
Neospora (ELISA)	\$6.25	1-5 working days
Ovine Progressive Pneumonia (OPP) (AGID)	\$4.25	1 working day
Parainfluenza 3 (PI 3) (SN)	\$6.25	4-7 working days
Porcine parvovirus (HAI)	\$4.25	4-7 working days
Porcine Reprod. Resp. Syn. (PRRS) (ELISA)	\$3.10	1-5 working days
Pseudorabies (ELISA or Latex)	\$2.10	1 working day

**SEROLOGY (continued)**  
**(1 ml serum, red top or separator tube)**

<b>Test Description</b>	<b>Price</b>	<b>Turn Around Time</b>
Pseudorabies (SN)	\$4.25	4-7 working days
Rocky Mountain Spotted Fever (IFA)	\$19.00	1-2 working days
Swine Influenza H1N1 ELISA	\$4.25	1-5 working days
Swine Influenza H3N2 ELISA	\$4.25	1-5 working days
Transmissible Gastroenteritis (TGE) (SN)	\$6.25	4-7 working days
Toxoplasmosis (IHA)	\$19.00	1 working day
Toxoplasmosis (IgM) (feline only)	\$19.00	1-2 working days
Toxoplasmosis (IgG) (feline only)	\$19.00	1-2 working days
Vesicular Stomatitis-Indiana (SN)	\$6.25	4-7 working days
Vesicular Stomatitis-New Jersey (SN)	\$6.25	4-7 working days
West Nile (IgM ELISA) (canine & equine)	\$10.75	1-3 working days

**TOXICOLOGY**

<b>Test Description</b>	<b>Price</b>	<b>Turn Around Time</b>
Aflatoxin B1 in cereal grains (qualitative)	\$22.50	4 working days
Aflatoxins in feedstuffs (quantitative)	\$41.00	7 working days
Aflatoxin M1 in milk (quantitative)	\$41.00	7 working days
Alkaloid screen (urine, stomach contents and suspected source material)	\$22.50	4 working days
Ammonia (serum, ocular fluid and frozen rumen contents)	\$22.50	4 working days
Anions in water (chloride, nitrate, nitrite, phosphate and sulfate)	\$33.75	4 working days
Arsenic (urine, hair, liver, kidney and suspected source material)	\$27.75	7 working days
Calcium (serum; ocular fluid)	\$16.25	4 working days
Carbamate pesticide screen	\$44.25	10-14 working days
Chlorinated pesticide screen	\$33.75	7 working days
Cholinesterase activity (whole blood, brain)	\$22.50	2 working days
Copper (serum, liver and kidney)	\$16.25	4 working days
Copper (fixed tissue; dry weight)	\$27.75	7 working days
Cyanide/prussic acid (frozen rumen contents and frozen plant material; qualitative)	\$16.25	2 working days
Drug screen (urine and serum)	\$43.25	4 working days
Ergot alkaloids in feedstuffs (quantitative)	\$56.50	7-10 working days

## TOXICOLOGY *(continued)*

Test Description	Price	Turn Around Time
Ergot/fescue alkaloids in feedstuffs (quantitative)	\$77.25	7-10 working days
Ergovaline in grass and hay (quantitative)	\$51.50	7-10 working days
Ethylene glycol (whole blood)	\$22.50	1 working day
Fumonisin B1 in feedstuffs (quantitative)	\$41.00	7 working days
GC/MS screen (stomach contents; talk to Toxicology Section prior to submission)	\$51.50	7 working days
Genestein, daidzein, glycitein in feedstuffs (quantitative)	\$45.00	10-14 working days
Ionophore screen in feedstuffs (qualitative)	\$16.25	4 working days
Iron (serum and liver)	\$16.25	4 working days
Lead in whole blood (heparinized or EDTA whole blood)	\$20.00	1 working day
Lead in tissue or source material (liver, kidney or source material)	\$16.25	4 working days
Magnesium (serum and ocular fluid)	\$16.25	4 working days
Mycotoxin screen in cereal grains (aflatoxin B1, ochratoxin A, vomitoxin, zearalenone; qualitative)	\$33.75	4 working days
Mycotoxin screen in processed feeds (aflatoxin B1, ochratoxin A, vomitoxin, zearalenone; quantitative)	\$65.00	7 working days
Nephrotoxin screen in feedstuffs (ochratoxin A, citrinin, oosporein; qualitative)	\$55.00	4 working days
Nitrate spot test (qualitative test on cornstalks and sorghum-sudan)	\$15.75	2 working days
Nitrate in feedstuffs (quantitative)	\$22.50	4 working days
Nitrate in ocular fluid (quantitative)	\$25.75	4 working days
Ochratoxin A in cereal grains (qualitative)	\$22.50	4 working days
Ochratoxin A in feedstuffs (quantitative)	\$41.00	4 working days
Oosporein in feedstuffs (qualitative)	\$40.00	4 working days
Organophosphate pesticide screen	\$33.75	7 working days
pH (rumen contents; no charge on submitted necropsy cases)	\$16.25	1 working day
Poisonous plant and animal identification	\$16.25	2 working days
Selenium (liver; other tissues by request; done in batches)	\$27.75	14-21 working days
Vitamin E (serum)	\$16.25	3 working days
Vomitoxin in cereal grains (qualitative)	\$22.50	4 working days
Vomitoxin in feedstuffs (quantitative)	\$41.00	7 working days
Zearalenone in cereal grains (qualitative)	\$22.50	4 working days
Zearalenone in feedstuffs (quantitative)	\$41.00	7 working days
Zinc (blood or serum in royal blue-topped trace element vacutainer tube, liver and kidney)	\$16.25	4 working days
Zinc phosphide/phosphine gas (frozen stomach contents)	\$27.75	7 working days

## **DIRECTIONS FROM THE EAST**

I-70 WEST to Columbia, take EXIT 128A, HWY 63 South. Take STADIUM BLVD EXIT. RIGHT on Stadium to the 4th stoplight, then RIGHT on COLLEGE AVE. to 2nd stoplight – ROLLINS ST. Go RIGHT on ROLLINS, turn RIGHT opposite WILLIAMS ST, onto E. CAMPUS LOOP into the parking lot, turn LEFT and go around the VET MED Conference Center and you will face the VMDL. Client parking is by the steps, across from the metered parking lot.

## **DIRECTIONS FROM THE WEST**

HWY I-70 to Columbia, take EXIT 124 – STADIUM BLVD. Turn RIGHT on Stadium Blvd and go to the 13th stoplight – COLLEGE AVE. (when you see the stadium on the right, there's approximately 3 lights left.) LEFT on COLLEGE AVE. to the 2nd stoplight – ROLLINS ST. Go RIGHT on ROLLINS. Turn RIGHT opposite WILLIAMS ST, onto E. CAMPUS LOOP into the parking lot, turn LEFT and go around the VET MED Conference Center and you will face the VMDL. Client parking is by the steps, across from the metered parking lot.

## **DIRECTIONS FROM THE SPRINGFIELD/JOPLIN AREA**

HWY 44 EAST to HWY 5 at Lebanon. NORTH on HWY 5 to Camdenton. HWY 54 EAST from Camdenton to Jefferson City  
HWY 63 NORTH from Jefferson City to Columbia. Take STADIUM BLVD EXIT. Go LEFT on Stadium to the 4th stoplight – COLLEGE AVE. Go RIGHT on COLLEGE AVE. to the 2nd stoplight – ROLLINS ST. Go RIGHT on ROLLINS. Turn RIGHT opposite WILLIAMS ST, onto E. CAMPUS LOOP into the parking lot, turn LEFT and go around the VET MED Conference Center and you will face the VMDL. Client parking is by the steps, across from the metered parking lot.

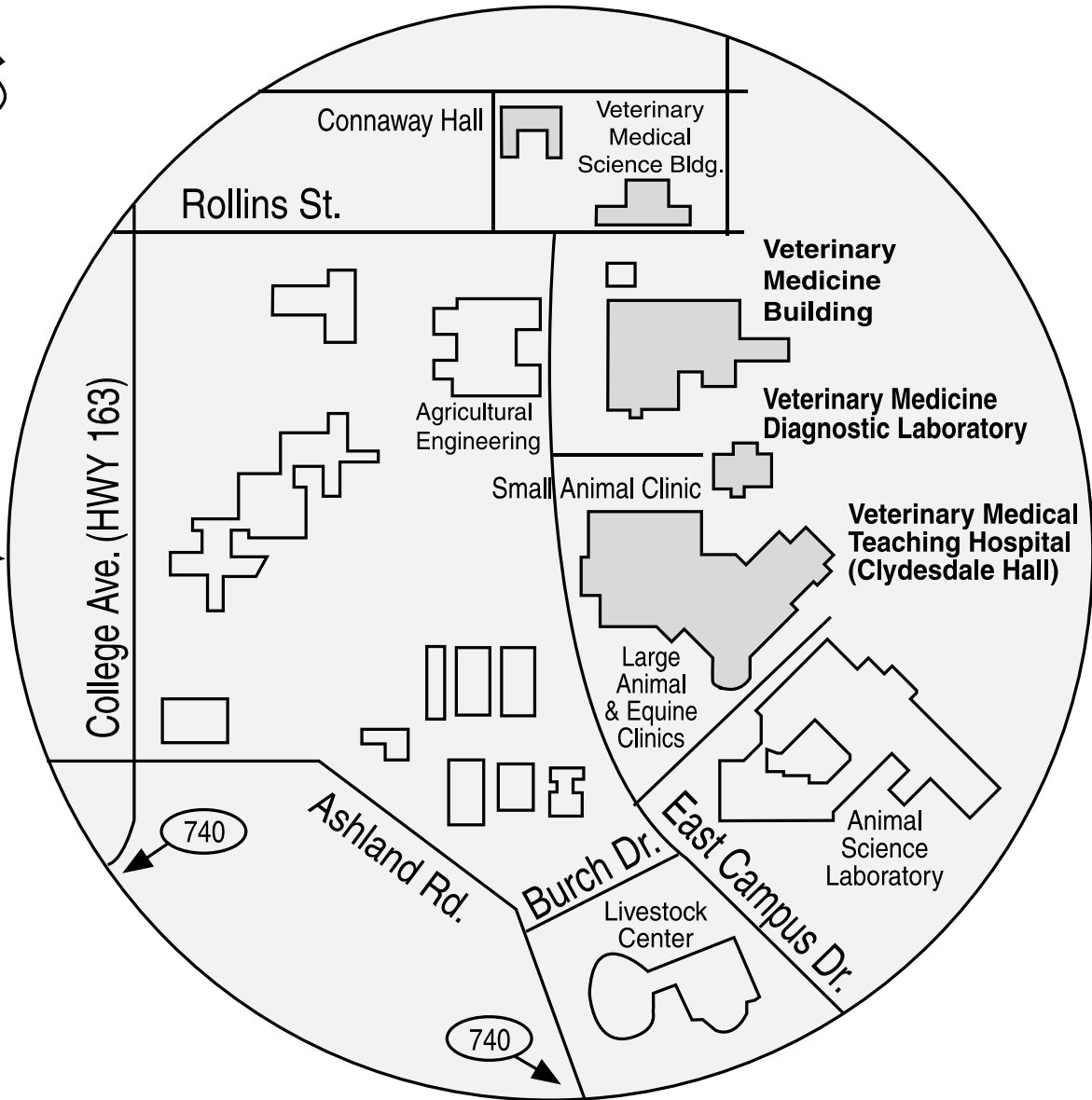
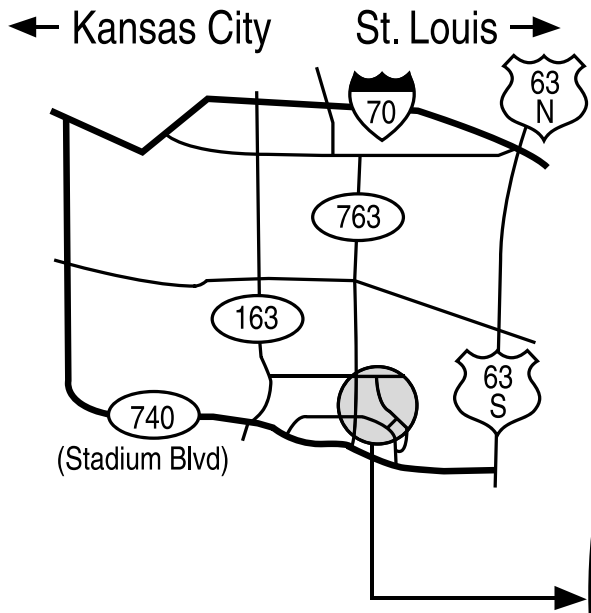
## **DIRECTIONS FROM NORTH MISSOURI**

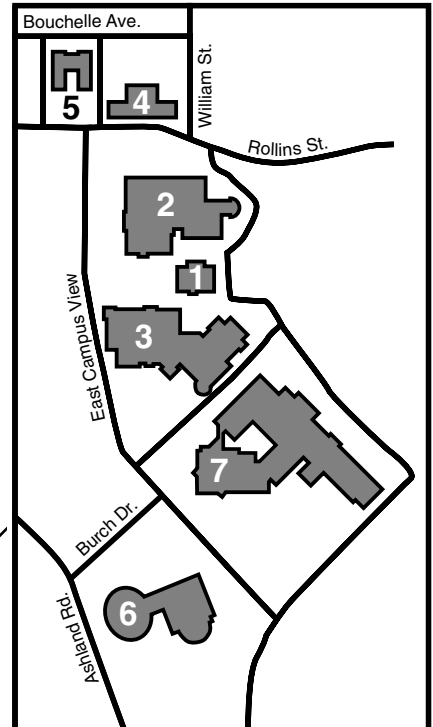
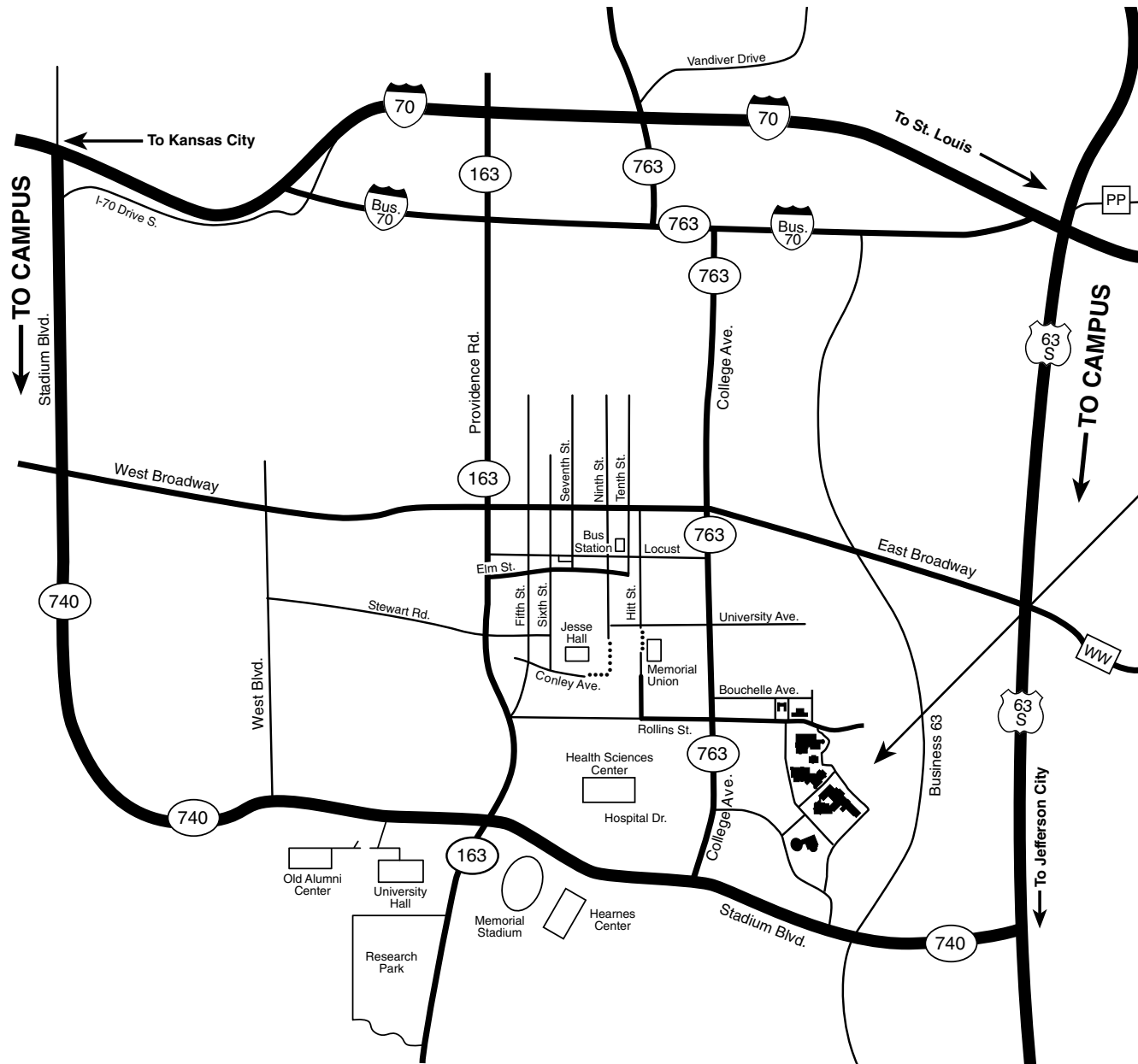
Take HWY 63 SOUTH to Columbia, STADIUM BLVD EXIT. Turn RIGHT onto STADIUM. Take Stadium to the 4th STOPLIGHT – COLLEGE AVE., Turn RIGHT onto College Ave, Take College to the 2nd STOPLIGHT – ROLLINS ST. Go RIGHT on ROLLINS ST. Turn RIGHT opposite WILLIAMS ST, onto E. CAMPUS LOOP into the parking lot, turn LEFT and go around the VET MED Conference Center and you will face the VMDL. Client parking is by the steps, across from the metered parking lot.

## **DIRECTIONS FROM JEFFERSON CITY AREA**

HWY 63 NORTH from Jefferson City to Columbia. Take STADIUM BLVD EXIT. Go LEFT on Stadium to the 4th stoplight – COLLEGE AVE Go RIGHT on COLLEGE AVE to the 2nd stoplight – ROLLINS ST. RIGHT on ROLLINS Turn RIGHT opposite WILLIAMS ST, onto E. CAMPUS LOOP into the parking lot, turn LEFT and go around the VET MED Conference Center and you will face the VMDL. Client parking is by the steps, across from the metered parking lot.

***SEE MAPS ON FOLLOWING PAGES***





1. **Veterinary Medical Diagnostic Laboratory**
2. **College of Veterinary Medicine Administration Building**
3. **Clydesdale Hall (Veterinary Medical Teaching Hospital)**
4. **Veterinary Science Building**
5. **Connaway Hall (Veterinary Pathobiology)**
6. **Trowbridge Livestock Center**
7. **Animal Science Research Center**

VETERINARY MEDICAL DIAGNOSTIC LABORATORY  
COLLEGE OF VETERINARY MEDICINE  
P.O. BOX 6023  
COLUMBIA, MO 65205