

## Comparative Pathology Laboratory Services List

<b>Test Code</b>	<b>Test Name</b>	<b>Description of Services</b>	<b>Specimen Requirement Notes</b>
	<b><u>CLINICAL PATHOLOGY</u></b>		
<b>C010</b>	CBC (Complete Blood Count)	RBC, Hemoglobin, Hematocrit, MCV, MCH, MCHC, WBC, instrument derived WBC differential, platelet count. Optional: RDW, MPV. Total plasma protein, if sufficient sample volume is available.	<b>EDTA or lithium heparin whole blood</b>
<b>C015</b>	Manual WBC differential exam	Peripheral slide preparation, Wright's staining with manual WBC differential cell count (as an addition to CBC when manual review is indicated)	
<b>C060</b>	Hematocrit and Hemoglobin	Hematocrit representation of packed cell volume and Total Hemoglobin	
<b>C070</b>	Reticulocyte count	Microscopic examination of supravital stained blood smear for reticulocyte count.	
<b>C080</b>	Fluid analysis (cytology read out by pathologist)	Microscopic examination of impression smear or fluid	
<b>C085</b>	Fluid analysis (cytology exam by clinical medical technologist)	Microscopic examination of impression smear or fluid	
<b>C090</b>	Tier 1 "Phenotyping" comprehensive chemistry panel	Albumin, Alkaline Phosphatase, ALT, Amylase, AST, Bilirubin (Total), BUN, Calcium, Chloride, Creatinine, Glucose, Phosphorus, Potassium, Protein (Total), Sodium	
	<b>Lipid Panels</b>	<b>Please inquire for custom panels</b>	
<b>C120</b>	Liver/Kidney function chemistry panel	Albumin, Alkaline Phosphatase, ALT, AST, Bilirubin (Total), BUN, Creatinine, Protein (Total)	
<b>C130</b>	"Small" animal chemistry panel (a general metabolic panel)	Albumin, Alkaline Phosphatase, ALT, AST, Bilirubin (Total), BUN, Calcium, Creatinine, Glucose, Phosphorus, Protein (Total)	
<b>C140</b>	Chemistry individual tests	Albumin, Alkaline Phosphatase, ALT, Amylase, AST, Bicarbonate (CO <sub>2</sub> ), Bilirubin (Total), BUN, Calcium, Chloride, Cholesterol (HDL), Cholesterol (LDL), Cholesterol (Total), Creatine Kinase (Total), Creatinine (enzymatic), GGT, Glucose, Hemoglobin A1c, Iron (Total), LDH, Lactate (Lactic Acid)*, Magnesium, Non-Esterified Fatty Acids (NEFA), Phosphorus, Potassium, Protein (Total), Sodium, Triglycerides (glycerol-blanked), Unsaturated Iron Binding Capacity (UIBC), Uric Acid	<b>Chemistries are routinely performed on cleanly separated serum or lithium heparin plasma. Certain tests may be assayed on EDTA plasma – please contact us to confirm specimen requirements.</b> <b>*Lactate analysis is by prior arrangement only (please reserve time with the lab).</b>
<b>C170</b>	Custom chemistry panel, up to 5 tests	<b>Up to 5 tests</b> from following list: Albumin, Alkaline Phosphatase, ALT, Amylase, AST, Bicarbonate (CO <sub>2</sub> ), Bilirubin (Total), BUN, Calcium, Chloride, Cholesterol (HDL), Cholesterol (LDL), Cholesterol (Total), Creatine Kinase (Total), Creatinine (enzymatic), GGT, Glucose, Iron (Total), LDH, Lactate (Lactic Acid)*, Magnesium, Phosphorus, Potassium, Protein (Total), Sodium, Triglycerides (glycerol-blanked), Uric Acid	

<b>C180</b>	Custom chemistry panel, up to 10 tests	<b>Up to 10 tests</b> from following list: Albumin, Alkaline Phosphatase, ALT, Amylase, AST, Bicarbonate (CO2), Bilirubin (Total), BUN, Calcium, Chloride, Cholesterol (HDL), Cholesterol (LDL), Cholesterol (Total), Creatine Kinase (Total), Creatinine (enzymatic), GGT, Glucose, Iron (Total), LDH, Lactate (Lactic Acid)*, Magnesium, Phosphorus, Potassium, Protein (Total), Sodium, Triglycerides (glycerol-blanked), Uric Acid	
<b>C190</b>	Urinalysis ( <b>not Urine Chemistry</b> )	Dipstick chemistry, specific gravity and microscopic sediment examination for crystals, bacteria and cellular elements.	
	Urine chemistry panels	Please inquire for custom panels: Urine Micro albumin, Urine Total Protein, Urine Creatinine, Urine Calcium, Urine Phosphorus, Urine Sodium, Urine Potassium, Urine Urea Nitrogen, Urine Glucose	<b>Urine chemistries may require extensive manual dilutions. Additional tech time charges may apply.</b>
<b>0055</b>	Miscellaneous clinical pathology procedures	Custom clinical pathology services based on pre existing rates	
<b>0055</b>	Outsourced clinical pathology procedures	Outsourced clinical pathology services as required	
<b>055D</b>	Discount on 25 or more clinical pathology samples submitted together	25 or more samples submitted together for clinical pathology services	
	<b>MICROBIOLOGY</b>		
<b>M010</b>	Aerobic Bacterial culture	Aerobic bacterial culture from an individual site or sample. Microorganism identification	
<b>M030</b>	Fungal culture	Fungal culture from an individual site.	
<b>M040</b>	Bacterial stains (acid fast, gram stain)	Slide preparation and staining to review for presence of bacteria	
<b>M050</b>	Autoclave function spore ampule test	Includes spore ampules with controls, testing and interpretation.	
<b>M060</b>	RODAC plate testing (tryptic soy agar with lecithin & tween plates)	Environmental monitoring of surfaces includes incubation and grid counting with a report on each site tested.	<b>Charged in increments of 10 plates (each package contains 10 monitoring plates)</b>
<b>M070</b>	Water sample culture and pH	Water sample aerobic bacterial culture and pH reading	
<b>M080</b>	Environmental swab culture	Sterile swab of environmental surfaces or transport vehicles in liquid media for aerobic bacterial culture	
	VHP disc indicator culture	Incubation and interpretation of indicator discs from treatment with <i>vaporized hydrogen peroxide</i> exposure.	<b>Each disc charge is equivalent to a single environmental swab specimen.</b>
<b>0055</b>	Miscellaneous microbiology procedures	Custom microbiology services based on pre existing rates	
<b>0055</b>	Outsource microbiology	Outsourced microbiology services	
	<b>MOLECULAR DIAGNOSTICS</b>		
<b>B010</b>	Helicobacter PCR (1 sample)	Helicobacter PCR on an individual sample. Determine genus and speciation of rodent isolates, if positive.	
<b>B020</b>	Helicobacter PCR (pooled from up to 5 samples)	Helicobacter PCR on a pooled sample. Determine genus and speciation of rodent isolates, if positive.	
<b>B040</b>	Pneumocystis carinii PCR (1 sample)	Pneumocystis carinii PCR submitted as an individual sample	
<b>B050</b>	Q-fever PCR (1 sample)	Q-fever PCR submitted as an individual sample	

<b>B060</b>	Mycoplasma PCR (1 sample)	Mycoplasma PCR submitted as an individual sample	
<b>B070</b>	Miscellaneous PCR (1 sample)	Miscellaneous PCR on etiological agents not routinely screened	
<b>0055</b>	Miscellaneous molecular diagnostics	Custom molecular diagnostic services based on pre existing rates	
<b>0055</b>	Outsourced molecular diagnostics	Outsourced molecular diagnostic services	
<b>055D</b>	Discount on 25 or more samples for molecular diagnostics submitted together	25 or more samples submitted together for molecular diagnostic services	
	<b><u>PARASITOLOGY</u></b>		
<b>D010</b>	Fecal flotation	Preparation of fecal sample and microscopic examination for ova and parasites	
<b>D060</b>	Fecal collection and pinworm check	Fecal and intestinal content collection from necropsy, and examination for pinworms under dissecting microscope	
<b>D070</b>	Pelage collection and fur mite check	Pelage collection, and examination during necropsy for fur mites under dissecting microscope	
<b>D080</b>	Direct fecal exam/smear	Fecal or intestinal content examination under microscope	
<b>D090</b>	Tape impression <i>collection and exam</i> for pinworm ova	Anal tape impression collection and microscopic examination for pinworm ova	
<b>D100</b>	Tape impression exam only for pinworm ova	Anal tape impression microscopic examination for pinworm ova	
<b>D105</b>	Tape impression exam for fur mites	Hair tape impression microscopic examination for fur mites	
<b>0055</b>	Miscellaneous parasitology	Custom parasitology services based on pre-existing rates	
<b>0055</b>	Outsourced parasitology	Outsourced parasitology services	
	<b><u>PATHOLOGY</u></b>		
<b>P010</b>	Tier 1 Phenotyping Necropsy with Histopathology	Gross necropsy, organ weights, tissue collection/processing (12 slides, approximately 50 tissues) and pathologist interpretation	
<b>P920</b>	LumX UCD Adult Clinical Health Screen	Includes: Rodent necropsy, <b>blood collection for serology</b> , pelage and cecal parasite exam, nasopharynx and cecal culture, <b>LumX UCD Level 2 serology</b> and histology based on lesions and clinical signs	
<b>P030</b>	CPL Weanling Clinical Health Screen	Includes: Rodent necropsy, pelage and cecal parasite exam, nasopharynx and cecal culture, and histology based on lesions and clinical signs	
<b>P940</b>	LumX JAX Adult Clinical Health Screen	Includes: Rodent necropsy, <b>blood collection for serology</b> , pelage intestinal, and cecal parasite exam, nasopharynx and cecal culture, <b>LumX JRHS quarterly serology panel</b> and histology based on lesions and clinical signs	
<b>P050</b>	JAX Weanling Clinical Health Screen	Includes: Rodent necropsy, pelage intestinal, and cecal parasite exam, nasopharynx and cecal culture, and histology based on lesions and clinical signs	
<b>P070</b>	Small animal gross necropsy	Dog, cat or rabbit necropsy with gross interpretation	
<b>P080</b>	Small animal gross necropsy	Dog, cat or rabbit necropsy with histological tissue	

	with histology	preparation, slide preparation, staining and interpretation	
<b>P090</b>	Large animal gross necropsy	Sheep, goat, pig, or calf necropsy with gross interpretation	
<b>P100</b>	Large animal gross necropsy with histology	Sheep, goat, pig, or calf necropsy with histological tissue preparation, slide preparation, staining and interpretation	
<b>P110</b>	Rodent gross necropsy	Rodent necropsy examination with gross interpretation (without histology)	
<b>P120</b>	Rodent gross necropsy with histology	Rodent Necropsy with histological tissue preparation, slide preparation, staining and interpretation	
<b>P121</b>	Other small lab animal gross necropsy	Fish or other small lab animal (non-rodent) necropsy examination (without histology)	
<b>P122</b>	Other small lab animal gross necropsy with histology	Fish or other small lab animal (non-rodent) necropsy examination with histological tissue preparation, slide preparation, staining and interpretation	
<b>P130</b>	Tissue collection per sample	Collection of tissue sample in formalin, snap frozen, or for further processing (per sample)	
<b>P140</b>	Blood collection and serum processing	Blood collection and serum or plasma processing from rodent at necropsy	
<b>P150</b>	Biopsy initial site	Biopsy initial site processing and histological interpretation	
<b>P160</b>	Biopsy (each additional site)	Biopsy additional site processing and histological interpretation (each)	
<b>P170</b>	Special stain slide processing with interpretation	Special stain slide processing with interpretation	
<b>P180</b>	Tissue processing with H&E Slide	Tissue submitted for preparation and slide processing	
<b>P190</b>	Necropsy room use by investigator (1-4 hours)	Miscellaneous supplies and cleaning after necropsy use	
<b>P200</b>	Necropsy room use by investigator (5-8 hours)	Miscellaneous supplies and cleaning after necropsy use	
<b>0055</b>	Miscellaneous Pathology diagnostics	Custom pathology services based on pre existing rates	
<b>0055</b>	Outsource Pathology diagnostics	Outsourced pathology diagnostic services	
<b>E001</b>	Slide interpretation (1-2 tissues) as part of study	Histological interpretation on up to two tissues per slide as part of study	
<b>E002</b>	Slide interpretation (greater than 2 tissues) as part of study	Histological interpretation on greater than two tissues per slide as part of study	
<b>E003</b>	Additional research services (pathologist) (per hour)	For consultation, photographic documentation, image analysis for specific requirements of a project	
<b>E004</b>	Additional research services (technician) (per hour)	For consultation or technical services on specific requirements of a project	
<b>0055</b>	Surcharges for supplies/drugs ordered	Surcharges for supplies/drugs ordered	
	<b><u>RODENT HEALTH SURVEILLANCE</u></b>		
<b>R902</b>	LumX Mouse UCD RHS Level 1 (whole animal)	Includes: Mouse necropsy, blood collection for serology (adult), pelage and cecal parasite exam, LumX UCD Mouse level 1 serology (adult) and histology (if needed) based on lesions and clinical signs	
<b>R903</b>	LumX Mouse UCD RHS Level 2 (whole animal)	Includes: Mouse necropsy, blood collection for serology (adult), pelage and cecal parasite exam, nasopharynx and cecal culture, LumX UCD Mouse level 2 serology (adult) and histology (if needed) based on lesions and clinical signs	

<b>R004</b>	Rat UCD RHS Level 1 (whole animal)	Includes: Rat necropsy, blood collection for serology (adult), pelage and cecal parasite exam, UCD Rat level 1 serology (adult) and histology (if needed) based on lesions and clinical signs	
<b>R005</b>	Rat UCD RHS Level 2 (whole animal)	Includes: Rat necropsy, blood collection for serology (adult), pelage and cecal parasite exam, nasopharynx and cecal culture, UCD Rat level 2 serology (adult) and histology (if needed) based on lesions and clinical signs	
<b>R006</b>	Guinea pig/Hamster UCD RHS Level 1 (whole animal)	Includes: Guinea Pig/Hamster necropsy, blood collection for serology (adult), pelage and cecal parasite exam, UCD Guinea Pig/Hamster serology (adult) and histology (if needed) based on lesions and clinical signs	
<b>R007</b>	Guinea pig/Hamster UCD RHS Level 2 (whole animal)	Includes: Guinea Pig/Hamster necropsy, blood collection for serology (adult), pelage and cecal parasite exam, <b>nasopharynx and cecal culture</b> , UCD Guinea Pig/Hamster serology (adult) and histology (if needed) based on lesions and clinical signs	
<b>R910</b>	JRHS Mouse Quarter Screen (whole animal)	Includes: Rodent necropsy, blood collection for serology, pelage intestinal, and cecal parasite exam, nasopharynx and cecal culture, <b>LumX JRHS quarter serology panel</b> and histology (if needed) based on lesions	
<b>R920</b>	JRHS Mouse Bi-annual Screen (whole animal)	Includes: Rodent necropsy, blood collection for serology, pelage intestinal, and cecal parasite exam, nasopharynx and cecal culture, <b>LumX JRHS bi-annual serology panel</b> and histology (if needed) based on lesions	
<b>R930</b>	JRHS Mouse Annual Screen (whole animal)	Includes: Rodent necropsy, blood collection for serology, pelage intestinal, and cecal parasite exam, nasopharynx and cecal culture, <b>LumX JRHS annual serology panel + LDH chemistry</b> and histology (if needed) based on lesions	
<b>R040</b>	JRHS Weanling Screen with Microbiology (whole animal)	Includes: Rodent necropsy, pelage intestinal, and cecal parasite exam, nasopharynx and cecal culture, and histology (if needed) based on lesions	
<b>070D</b>	Discount on 25 or more animals for RHS submitted together	25 or more animals submitted together for RHS services	
	<b>SEROLOGY</b>		
	<b>Etiology Key for Mouse Pathogens Commonly Tested at CPL</b>	CARB – Cilia Associated Respiratory Bacillus Ectro – Ectromelia Virus E.cun – Encephalitozoon cuniculi EDIM – Epidemic Diarrhea of Infant Mice Virus Han – Hanta Virus K – Mouse Pneumonitis K Virus LCM – Lymphocytic ChorioMeningitis Virus MAD 1 – Mouse Adeno DNA Virus 1 MAD 2 = Mouse Adeno DNA Virus 2 MCMV – Mouse CytoMegaloVirus MHV- Mouse Hepatitis Virus MNV – Mouse Noro Virus MPV – Mouse Parvo Virus MVM – Minute Virus of Mice (parvovirus type) NS-1 – Non-Structural 1 (parvovirus type) M.pul – Mycobacterium pulmonis M.arth – Mycobacterium arthriditis Poly – Polyomavirus PVM – Pneumonia Virus of Mice	

		Reo-3 – Reovirus 3 Sendai – Sendai Virus SV5 – Simian Virus 5 TMEV – Theiler's Muine Encephalomyelitis Virus <b>part of GDVII strain</b> Trep – Treponema species infections Tyzzler – Tyzzler's Disease caused by Clostridium piliforme bacteria	
<b>L041</b>	LumX UCD Mouse Level 1 serology panel	MHV, MPV, MVM, M.pul and arth, TMEV (GDVII), Ectro, EDIM, Sendai, PVM	
<b>L042</b>	LumX UCD Mouse Level 2 serology panel	MHV, Sendai, PVM, MPV, MVM, M.pul and arth, TMEV (GDVII), Reo-3, LCM, Ectro, EDIM, MAD 1 and 2, MNV	
<b>S061</b>	UCD Rat Level 1 serology panel	RCV and SDAV, Sendai, PVM, KRV and H1 and RPV, M.pul and arth	
<b>S062</b>	UCD Rat Level 2 serology panel	RCV and SDAV, Sendai, PVM, KRV and H1 and RPV, M.pul and arth, Reo-3, LCM, TMEV (GDVII), CARB, Han	
<b>L080</b>	LumX UCSF Mouse Level 2 Serology Panel	MHV, Sendai, PVM, MPV, MVM, M.pul, EDIM, TMEV (GDVII), Ectro	
<b>S090</b>	UCSF Rat Serology Panel	RCV and SDAV, Sendai, PVM, Parvo (NS-1), M.pul, TMEV (GDVII)	
<b>S155</b>	UCD Guinea Pig/Hamster serology panel	Sendai, PVM, LCM, Tyzzler's, SV5, Reo-3, E. cun	
<b>L180</b>	LumX JRHS Mouse Quarterly Serology Panel	MHV, Sendai, PVM, MPV, MVM, M.pul and arth, Tyzzler's, TMEV (GDVII), Ectro, EDIM, MNV	
<b>L190</b>	LumX JRHS Mouse Bi-annual Serology Panel	MHV, Sendai, PVM, MPV, MVM, M.pul and arth, Tyzzler's, TMEV (GDVII), Ectro, EDIM, MNV, MAD 1 and 2, LCM, E.cun, CARB, Han, Reo-3, MCMV, MTV	
<b>L200</b>	LumX JRHS Mouse Annual Serology Panel	MHV, Sendai, PVM, MPV, MVM, M.pul and arth, Tyzzler's, TMEV (GDVII), Ectro, EDIM, MNV, MAD 1 and 2, LCM, E.cun, CARB, Han, Reo-3, MCMV, MTV, Polyoma, K virus, <b>LDHV (LDH Serum chemistry)</b>	
<b>L210</b>	LumX JRHS Mouse Importation Serology Panel	MHV, Sendai, PVM, MPV, MVM, M.pul and arth, Tyzzler's, TMEV (GDVII), Ectro, EDIM, MNV, LCM, Han	
<b>L900</b>	LumX Mouse I Panel	Ectro, EDIM, TMEV (GDVII), MHV, M. pulmonis, Sendai, PVM	
<b>S220</b>	CPL Individual serology test (part of panel)	Individual rodent or rabbit serology tests (added as part of panel with greater than 3 agents)	
<b>S230</b>	CPL individual serology test	Individual rodent or rabbit serology test	
<b>S240</b>	CPL 2-serology test panel	2 serology tests	
<b>S250</b>	CPL individual IFA (immunofluorescent antibody) test	Individual rodent or rabbit IFA test	
<b>L950</b>	Luminex testing without supplies	Charge for running Luminex tests with supplies costs at additional charge.	
<b>0060</b>	Miscellaneous serology diagnostics	Custom serology services based on pre existing rates	
<b>0060</b>	Outsource serology diagnostics	Outsourced serology services	
<b>060D</b>	Discount on 25 or more samples for serology submitted together	25 or more samples submitted together for serology services	
	<b>POLYCLONAL ANTIBODY PRODUCTION</b>		
<b>A040</b>	Additional antigen boost	Additional antigen injection above monthly program	
<b>A050</b>	Additional blood collection	Additional blood collection above monthly program	

<b>A060</b>	Monthly antibody program-rabbit (CPL protocol)	Rabbit antibody program-maintenance of rabbit, two antigen administrations, two blood collections and exsanguinations	
<b>A080</b>	Monthly antibody program-mouse (CPL protocol)	Mouse antibody program-maintenance of mouse, two antigen administrations and two blood collections	
<b>A100</b>	Monthly antibody program-guinea pig (CPL protocol)	Guinea pig antibody program-maintenance of guinea pig, two antigen administrations and two blood collections	
<b>0075</b>	Miscellaneous antibody program services	Custom antibody services based on pre existing rates	