

COMBINED VETERINARY CLINICAL PATHOLOGY RESIDENCY AND PHD PROGRAM

Department of Biomedical Sciences and Pathobiology
Virginia-Maryland Regional College of Veterinary Medicine
Virginia Polytechnic Institute and State University

- I. Program goals
 - a. The goal of the Combined Veterinary Clinical Pathology Residency and PhD Program (hereafter referred to as the Program) is to produce a competent diagnostic clinical pathologist that is qualified for board certification by the American College of Veterinary Pathologists (ACVP), and is able to conduct quality, independent and original research.
- II. Objectives
 - a. The Program will provide residents with the following:
 - i. Advanced training in all aspects of veterinary clinical pathology
 - ii. Fulfillment of requirements for ACVP board eligibility
 - iii. Graduate course work for a PhD degree
 - iv. Experience in all aspects of research, including study design, conducting a project, scientific writing, and oral presentation
 - v. Teaching experience
- III. Prerequisites
 - a. Mandatory prerequisites for application to the Program include:
 - i. A DVM or equivalent degree
 - ii. Admission to the Graduate School Programs of VMRCVM and Virginia Tech
 - b. Highly desirable but not mandatory prerequisites for application to the Program include:
 - i. A DVM or equivalent degree from an AVMA accredited veterinary college
 - ii. At least one year of post-DVM graduate clinical experience
- IV. Application procedure
 - a. Candidates will be judged on the following required materials:
 - i. Letter of intent
 - ii. Curriculum vitae
 - iii. 3 letters of reference
 1. At least 1 letter (preferably 2 letters) should be from a veterinary clinical pathologist
 2. At least 1 letter should comment on the applicant's research experience
 - iv. Official college transcripts from all undergraduate, graduate and professional schools attended
 - v. Official GRE General Test scores
 - vi. Official TOEFL scores (for applicants whose primary language is not English)
 - b. All required materials and inquiries should be sent to the Veterinary Clinical Pathology Resident Coordinator, Dr. Katie Boes (kmn@vt.edu), VMRCVM, Duckpond Drive, Phase II, Virginia Tech (0442), Blacksburg, VA 24061.
 - c. The deadline for application is November 1 prior to the start of the Program.
- V. Administration of the program
 - a. The Program will be administered by the Department of Biomedical Sciences and Pathobiology (DBSP) and the Biomedical and Veterinary Sciences (BMVS) Graduate Program.
 - b. The Program will begin with the start of the Second Summer Semester of the Virginia Tech Academic Calendar (approximately early July), and will span 5-6 years (Table 1).

Table 1. Approximate Timetable for the Program.

Year in Program	Month	Residency	PhD
1 st	July	Start 1 st year of residency	Start 1 st year of Program
	Jan.		Select PhD Advisor
	June		Select PhD Committee Familiarization with lab
2 nd	July	Start 2 nd year of residency	Start 2 nd year of Program
	June		PhD project outline accepted
3 rd	July	Start 3 rd year of residency	Start 3 rd year of Program
	Dec.	Course work completed Pathology textbooks read	Course work completed Manuscript accepted
	Jan.	Apply for exam	
	March	Journal articles read	
	April	Partially protected study time begins	
	June	Completion of residency Fully protected study time begins	
4 th	July		Start 4 th year of Program
	Sept.	ACVP board exam	
	Dec.		Preliminary exam
5 th (6 th)	July		Start 5 th (6 th) year of Program
	June		Completion of PhD

- c. Resident Coordinator
 - i. The resident will be pre-assigned a Resident Coordinator who is board certified in veterinary clinical pathology by the ACVP.
- d. PhD Advisor and PhD Committee
 - i. The resident will select a PhD Advisor and Committee during the first year of the Program.
 - ii. At least one clinical pathologist in the DBSP will be on the resident’s PhD Committee.
 - iii. The PhD Advisor and Committee will be in charge of administering the PhD component of the resident’s Program.
 - iv. The resident’s PhD program will not interfere with the resident’s training in clinical pathology (see Section VI).
- VI. Clinical pathology residency
 - a. Evaluation
 - i. Residents will take a mock board examination each year of the Program in which they are not boarded.
 - ii. The resident will be formally evaluated once each year by all of the Program’s clinical pathologists (see Page 6).
 - iii. Evaluations will be discussed with and returned to the resident, and a copy will be retained by the Resident Coordinator.
 - b. Clinical pathology service duty (Table 2)
 - i. Residents will provide diagnostic service, along with an ACVP boarded clinical pathologist, to the VMRCVM Veterinary Teaching Hospital Clinical Laboratory.

- ii. Emergency duty, including weekdays, weekends and holidays, will begin sometime during the resident's 2nd or 3rd year, and its initiation will be at the discretion of the Program's clinical pathologists.
- c. Surgical biopsy service duty (Table 2)
 - i. Residents will complete 4 weeks of surgical biopsy service duty, along with an ACVP boarded anatomic pathologist, during the first two years of the Program.

Table 2. Approximate Time Residents will be on Service Duty.

Year in Program	Service Type	Approximate Duration	Comments
1 st	CP	26 weeks/year	2-3 weeks/month starting in August
	SB	2 weeks/year	
2 nd	CP	24 weeks/year	2 weeks/month
	SB	2 weeks/year	
3 rd	CP	18 weeks/year	2 weeks/month through December; 1 week/month starting in January
4 th -5 th (6 th)	CP	6 weeks/year	

Abbreviations: CP, clinical pathology; SB, surgical biopsies

- d. Time off service
 - i. The time spent off of service should be used for advancement in the Program, such as studying for board certification and graduate courses, completing presentations, manuscripts and research projects, and preparing for teaching.
- e. Teaching
 - i. Residents will function as a Teaching Assistant for the sophomore veterinary student Clinical Pathology course (VM 8414) throughout the 3 years of the residency. During the 1st year of the Program, residents will attend all lectures and laboratories, and hold weekly office hours. During the 2nd year of the Program, residents will attend all laboratories and teach 1-2 lectures. During the 3rd year of the Program, residents will attend all laboratories.
 - ii. Residents will participate in clinical instruction of senior veterinary students in the Laboratory Services Clerkship (VM 9724) and Clinical Pathology Clerkship (VM 9704) during the weeks they are on Clinical Pathology Service Duty.
 - iii. Residents will lead Pathology Club rounds at least once a semester.
 - iv. Residents will assist at any continuing education seminars offered by the DBSP's clinical pathology service, including VMRCVM's Annual Clinical Pathology Workshop for Pathology Residents.
- f. Course work and seminars
 - i. Residents will complete the course work required by the Residency Program (Table 3) and the BMVS Graduate Program (<http://www.vetmed.vt.edu/acad/grad/gradhb/gradhb.pdf>).
 - ii. All resident courses will be completed within the first 3 years of the Program.
 - iii. Residents are expected to achieve marks that are required by the Graduate School (i.e. a cumulative GPA of at least 3.0).

Table 3. Clinical pathology residency courses.

REQUIRED RESIDENCY COURSES			
Course	Title	Course Leader	Credits
BMVS 5014	Animal Pathology Residency*	Geoffrey Saunders	Variable
BMVS 5144	Oncologic Pathology	Geoffrey Saunders	2
BMVS 5164	Veterinary Clinical Hematology	TBA	TBA
BMVS 5194	Clinical Micropathology [‡]	Tom Cecere	None
BMVS 5284	Cellular Pathology	Kurt Zimmerman	3
BMVS 5734	Clinical Pathology (VM 8414) [‡]	Nicole Weinstein	None
BMVS 6074	Clinical Topics Rounds [§]	Greg Daniel	1
BMVS TBA	Veterinary Clinical Chemistry	TBA	TBA

OPTIONAL RESIDENCY COURSES			
Course	Title	Course Leader	Credits
BCHM 5124	Life Sciences Biochemistry	VT Faculty	3
BMVS 4054	Laboratory Animal Management	David Moore	3
BMVS 5124	Reproductive Pathology (VM 8474)	D. Phillip Sponenberg	1
BMVS 5204	Advanced Veterinary Cytology	Kurt Zimmerman	1
BMVS 5274	Systems Pathology	Geoffrey Saunders	3
BMVS 5794	Clinical Neuropathology	Bernard Jortner	1
BMVS 6064	Advanced Topics in Veterinary Medicine	Greg Daniel	1

*1 credit per 2 weeks of clinical pathology or surgical biopsy service duty

[‡]Attendance required, but no credit hours received

[§]6 credits required

g. Rounds

- i. Residents will attend, participate in, and lead weekly Cytology Rounds and Clinical Pathology Resident Rounds (BMVS 6074).
- ii. Residents will attend and participate in weekly Histopathology Rounds (BMVS 5194).
- iii. Residents will attend weekly Necropsy Rounds.
- iv. If the resident does not have at least one year of post-DVM graduate clinical experience, then the resident will attend and participate in selected Small Animal Resident rounds (BMVS 6064).

h. Annual meetings

- i. Residents will present a case each year at an annual regional meeting, such as the Southeastern Veterinary Pathology Conference.
- ii. Residents will submit a case or poster/platform presentation each year to an annual national meeting, such as the ACVP/ASVCP Concurrent Annual Meetings.
- iii. Residents are encouraged to make presentations at other seminar series and the VMRCVM Annual Research Symposium.
- iv. The Department will attempt to provide partial or complete funding for residents to travel to and attend scientific meetings.

- i. Research and publications
 - i. Residents will be the primary author on at least one “What is Your Diagnosis?” or “Case Report” manuscript in a refereed journal.
 - j. ACVP boards
 - i. Residents will be ACVP board eligible at the discretion of the Program’s clinical pathologists.
 - ii. Boards preparation
 - 1. The resident is encouraged to schedule partially protected board preparation time 5-6 months prior to taking the board exam. At least 1 week/month of dedicated board preparation time is encouraged.
 - 2. Completely protected board preparation time will begin 3 months immediately prior to taking the board exam for the first time. During this time, the resident will not have any other commitments to the Program, including service duty, course work, or PhD research.
 - iii. Requirements for endorsement to sit for the ACVP board examination include:
 - 1. Completion of duty assignments
 - 2. Completion of course work
 - 3. Outlined and accepted PhD project
 - 4. At least 1 manuscript accepted to a peer-reviewed journal
 - 5. Passing/acceptable scores on a mock board exam
- VII. Program completion
- a. Residents will receive a Certificate of Residency upon successful completion of the first 3 years of the Program, and a PhD degree upon successful completion of the Program.
 - b. Residents are encouraged to evaluate the Program by meeting with the Department Head for an exit interview upon completion of the Program.
- VIII. Acknowledgement of requirements
- a. I have read, and I understand and agree to the Program’s requirements.

	Printed Name	Signature	Date
Resident:	_____	_____	_____
Residency Coordinator:	_____	_____	_____
PhD Advisor:	_____	_____	_____

CLINICAL PATHOLOGY RESIDENT EVALUATION
 Department of Biomedical Sciences and Pathobiology
 Virginia-Maryland College of Veterinary Medicine
 Virginia Polytechnic Institute and State University

Date of Evaluation: _____

Resident: _____

Signature: _____

Resident Coordinator: _____

Signature: _____

Clinical Pathologist: _____

Signature: _____

Clinical Pathologist: _____

Signature: _____

	Exceeds Expectations	Meets Expectations	Needs Improvement
Knowledge	+	+	+
Skills	+	+	+
Responsibility	+	+	+
Attitude	+	+	+
Communication	+	+	+
Overall	+	+	+

Strengths: _____

Areas for improvement: _____

Courses taken: _____

Completed readings: _____

Current readings: _____

Completed projects/manuscripts: _____

Current projects/manuscripts: _____

Presentations given: _____

Other accomplishments: _____

General comments and recommendations: _____
