



**RESIDENCY TRAINING PROGRAM REGISTRATION  
2018-2019  
NEUROLOGY**

**Part Two**

**Part Two of the Neurology Residency Training renewal process addresses general features of the program that apply to all current residents. These questions will be used to provide the Residency Training Committee with information needed to judge the structure, quality, scope, and consistency of training provided.**

Current Date:

Program Director Name:

(Must be a Diplomate of ACVIM in the Specialty of Neurology or an approved Diplomate of the European College of Veterinary Neurology)

Name of Sponsoring Institution (Residency Training Program):

**1. For multi-site residency programs:** To ensure uniformity of training and compliance with current Certification Manual (CM) requirements, training programs that include multiple sites must provide detailed information regarding supervision and facilities available at each specific site(s).

Secondary Site/Outside Rotations (if applicable):

(Please include the following for each site: Supervising Diplomate (ACVIM or other specialty), amount of time scheduled at the site and training requirements to be met.

University of Pennsylvania – Molly Church, VMD, DACVP (monthly neuropathology rounds)
Antech - Dr. Jennifer Owen, DVM, DACVP (50 hours of clinical pathology training)
Cornell University: Dr. Andrew Miller, DVM, DACVP (50 hours of anatomic pathology training)

**2. Length of Training Program:**

	Yes	
2 years	<input type="checkbox"/>	
3 years	<input checked="" type="checkbox"/>	
Other -provide details		

**3. Advanced Degree:**

	Yes	No	Optional	
Masters:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
PhD:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Briefly explain how the degree is integrated into the residency program:

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4. Please list all ACVIM Supervising **Diplomates** (Cardiology, Large Animal Internal Medicine, Neurology, Oncology, Small Animal Internal Medicine, ECVIM, or ECVN Diplomates ) providing supervision off-site and explain the situation and the agreements provided for contact with the resident. (Note, in Part One, current ACVIM Supervising Diplomates are included; and you are requested to provide additional comments for off-site supervision here).

Name of Diplomate(s)	Comments

5. Please list all **Diplomates** of the American College of Veterinary Pathology or the European College of Veterinary Pathologists in the areas of clinical pathology or gross/histopathology associated with residency training. If off-site, please explain the situation, and the method of providing direct contact with the resident.

Name of Diplomate(s)	Clinical or Gross	Comments
Andrew Miller, DVM, DACVP	Gross	Resident will be travelling to Cornell University to spend 50 hours learning gross/histologic neuropathology under direct supervision with Dr. Miller
Jennifer Owen, DVM, DACVP	Clinical	Resident will be spend 50 hours learning clinical pathology under direct supervision with Dr. Owen at the Antech lab within Red Bank Veterinary Hospital
Molly Church, VMD, DACVP	Gross	Resident makes monthly trips to UPenn to participate in rounds and review slides/case presentation

6. Please list all **Diplomates** of the American College of Veterinary Radiology or the European College of Veterinary Diagnostic Imaging associated with residency training. If off-site, please explain the situation, and the arrangements for direct contact with the resident.

Name of Diplomate(s)	Comments
Fernando Castro, DVM, DACVS, DACVR	On-site
Andrea Weissman, DVM, DACVR	On-site

7. Please list all **Diplomates** available for consultation in the areas of dermatology, surgery, ophthalmology, anesthesiology, emergency/critical care, clinical nutrition, clinical pharmacology, behavior, and/or theriogenology. If off-site, please explain the situation and the arrangements provided for contact with the resident.

Name of Diplomate(s)	Specialty	Comments
Greg Griffeth – DVM, DACVD	Dermatology	On-site
Michael Ringle, DVM, DACVO	Ophthalmology	On-site
Melissa Marshall, DVM, DACVECC	Emergency/Critical Care	On- site
Garrett Davis, DVM, DACVS	Surgery	On-site

Alison A. Smith – DVM, DACVAA	Anesthesia	On-site
Martha Cline – DVM, DACVN	Nutrition	On-site

8. Please list the residents who have completed the training program within the last five years, including the year that each individual's training program ended and whether the individual has completed the Board certification process.

Name(s)	Program End Date (mm/dd/yyyy)	Diplomate? (Yes or No)
None, last was Dr. James Hammond		

9. Please list the residents currently participating in your training program, along with the beginning date of the program, expected ending date of the program, and designated resident advisor.

Resident Name(s) (first/last)	Length of Program (in years)	Program Start Date (mm/dd/yyyy)	Program End Date (mm/dd/yyyy)	Resident Advisor Name(s)
Joshua Warren	3	07/01/2017	07/01/2020	Dr. Eric Glass

**The following questions will be used to provide the Residency Training Committee with information needed to judge the structure, quality, scope, and consistency of training provided.**

**NOTE:** Direct supervision is required during clinical training, with the time required specified by each particular specialty. Direct supervision is defined as follows: The Supervising Diplomate and resident are participating in a clinical practice in which both the Diplomate and the resident are on duty and interactively and concurrently managing cases. The Diplomate need not personally examine each patient seen by the resident, but must remain physically available for consultation. Please use this definition when responding to the following questions regarding clinical rotations.

10. Is this a traditional or non-traditional residency training program? A traditional neurology residency is a two (2) or three (3) year postgraduate training program, with a minimum of ninety six (96) weeks of supervised clinical training with a majority of the time spent at one location. A non-traditional neurology residency allows for training that may occur in non-contiguous blocks of time over an extended time period.

Traditional	<input checked="" type="checkbox"/>
Non-traditional	<input type="checkbox"/>

For non-traditional programs, please provide a detailed description of the residency program, including length of program, proposed annual schedule, and the amount of time of direct Diplomate supervision for each location of the residency.

11. The ACVIM Neurology Certification Manual (CM) requires that each resident experience 75 weeks (minimum) of clinical Neurology training under the supervision of either a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of ECVN. **The 75 weeks should include at least 50 weeks of direct supervision (see definition in CM) and the remainder as indirect supervision (indirect supervision is satisfied by the Supervising Diplomate Neurologist being available for face-to-face contact with the resident at least 4 days per week).**

**Please provide an outline of planned yearly schedule, including number of weeks of direct and indirect supervision (i.e. in year 1, the resident will be directly supervised for 25 weeks etc.) A table similar to the example below outlining the proposed weekly schedule of duties for the residents should be provided:**

**EXAMPLE TABLE ONLY:**

	<b>Year I</b>	<b>Year II</b>	<b>Year III</b>
<b>Medical Neurology *</b>			
<b>Neurosurgery</b>			
<b>Neurology/Neurosurgery     Direct Supervision</b>	36	36	
<b>Neurology/Neurosurgery -     Indirect Supervision</b>			34
<b>Internal Medicine</b>	4	2	2
<b>Clinical Pathology</b>	2		
<b>Radiology</b>	2		
<b>Neuropathology</b>		2	2
<b>Other Rotation (please list the name of each rotation)</b>			
		1	
	2	4	4
<b>Research</b>	4	5	8
<b>Independent Study</b>			
<b>Vacation</b>	2	2	2
<b>Total</b>	<b>52</b>	<b>52</b>	<b>52</b>

Numbers indicated are in “weeks”.

\* Many residencies are a combined neurology / neurosurgery program with no distinct separation between the services. Some programs, however, have separate training with a surgery service and this example includes that possibility in describing the weekly rotations.

*The example table is only a listing of a proposed weekly schedule for each of the three years of a typical 3-year residency program, including all that is required by ACVIM without making any specific recommendations.*

**Please indicate the outline of planned yearly schedule here:**

	<b>Year I</b>	<b>Year II</b>	<b>Year III</b>
<b>Medical Neurology *</b>			
<b>Neurosurgery</b>			
<b>Neurology/Neurosurgery - Direct Supervision</b>	30	20	10
<b>Neurology/Neurosurgery - Indirect Supervision</b>	6	10	16
<b>Internal Medicine</b>	2	3	2
<b>Clinical Pathology</b>		1	
<b>Radiology</b>	1		1
<b>Neuropathology</b>	2	2	2
<b>Other Rotation (please list the name of each rotation):</b>			
<b>Other: Out rotation (Med school, other Neuro/sx     program)</b>	1		5
<b>Other: Neuro Brain Camp</b>		2	
<b>Research</b>	4	6	6
<b>Independent Study</b>	4	6	8
<b>Vacation</b>	2	2	2

<b>Total *</b>	52	52	52

**\*The totals should add up to 52 weeks.**

12. Describe how daily clinical case rounds are conducted and supervised:

Grand rounds are conducted daily with all specialists and general practitioners. These rounds include all clinicians in the hospital (all specialists, ER doctors, interns, specialty interns, general practitioners). These rounds serve as teaching rounds for interns and residents. After overnight transfers are discussed, interns and residents present recent cases for discussion with the entire group.

Neurology service rounds are conducted twice daily and include boarded neurologists, resident and interns (+/- externs). The rounds focus on daily inpatient updates along with focused discussions on particular cases that provide valuable learning opportunities.

13. The neurology specialty requires that the resident spend at least 50 hours during the residency in the following rotations: Radiology, Clinical Pathology, Neuropathology and Neurosurgery. A Training Agreement Form must be completed and signed by the Diplomate supervising the required training, regardless of whether the training occurs on site or off-site. **Please use the standardized “Training Agreement Form” found on the ACVIM website ([www.ACVIM.org](http://www.ACVIM.org)) to document proof of supervision for all required contact hours (clinical pathology, radiology, neuropathology surgery, etc.) in rotations other than neurology.** 1 Training Agreement form is required per rotation per resident at the beginning of the residency. Forms do not need to be resubmitted each year as long as a valid Training Agreement Form is on file.

In addition, please provide a brief description of how each phase of this required training is accomplished.

Radiology: 50 hours with a Board-certified radiologist interpreting radiographs, attending seminars and participating in and evaluating the results of special radiographic procedures.

On-Site with Drs. Castro and Weissman. Resident is present for all advanced imaging procedures and interprets images with Resident Advisor and Drs. Castro and Weissman.

Clinical Pathology: 50 hours with a Board-certified pathologist or clinical pathologist evaluating clinical pathologic findings, attending clinicopathologic conferences, and examining surgical sections.

Resident will spend 50 hours off-site (Antech Lab) with Dr. Jennifer Owen

Neuropathology: 50 hours devoted to review of veterinary neuropathology. This time may be spent in lecture series, seminars, or a formal training program recognized and approved by the college.

The resident will attend neuropathology rounds at Univ of Penn monthly for all three (3) years (2.5-3hrs per session). Additionally, the practice is equipped with a necropsy space for gross pathology study. Resident will also have the opportunity for out-rotation in gross/histopathology at Cornell with Dr. Miller

Neurosurgery: 50 hours participating in veterinary neurosurgical procedures. Please provide a specific description of the type of participation [i.e. observation, performance of neurosurgery], and credentials of those providing the training [i.e. ACVS vs. ACVIM Neurology]. A Training Agreement Form must be completed if this training is provided by individuals other than the ACVIM (Neurology) or ECVN supervising Diplomate for the residency training program.

Neurosurgical procedures routinely conducted include hemilaminectomies, dorsal laminectomies, ventral slots, stabilization techniques of the vertebral column (trauma, instability), fenestration techniques, craniectomies and craniotomies as well as nerve and muscle biopsies, placement of VP shunts, etc.

Eric Glass, MS, DVM, DACVIM (Neurology)

Rachel B. Song, VMD, MS, DACVIM (Neurology)

14. The neurology specialty requires that the resident be able to perform and interpret current electrodiagnostic procedures. Briefly state how the concepts of electrodiagnostics (including EEG) and their clinical application will be taught to residents during the training program. Specifically state whether or not the resident will have hands-on electrodiagnostics experience:

Electrodiagnostics are performed in house. Concepts and clinical application of current electrodiagnostic procedures are taught via case examples from present and past clinical cases.

15. The college requires that the resident spend a minimum of 80 hours involved in routine and regular participation in a critical review of the literature (e.g. journal club) during the residency training program. Please explain how this requirement is met:

Hospital rounds with specialists (daily); Neurology Journal Club (weekly); ACVIM qualifying boards review (weekly); Surgery boards review (monthly); Neurology case presentation online with group of ACVIM (Neurology) diplomates: 3-5 cases per week. Departmental grand rounds are held weekly with a variety of formats including case presentation, topic review, original research, etc. In addition, neurology department grand rounds are held weekly focusing on pathophysiology of disease and neuroanatomy.

16. The neurology specialty requires that the advisor meet with the resident at 6 month intervals to assess, review and critique the resident's progress and weekly schedule of activities. Please explain how this is accomplished:

Resident and advisors will meet on a weekly basis. Resident required to maintain case/neurosurgery log. Formal review will occur every 6 months during the residency.

17. The neurology specialty requires that the resident complete a significant research or clinical investigative project. Please describe how you plan for the resident to undertake, monitor, and complete a project. Include a timeline that the resident and mentor will use as a guide for completion of the project. Note that publication of this research project is not a requirement.

The resident will be required to complete a research project suitable for publication in one of the major veterinary journals.  
Resident will choose a topic during their first year. Scope of project will likely involve case series or retrospective study. The opportunity for basic science research will also be available to the resident.

18. Please indicate the availability of the following facilities or equipment. Indicate if these are available at the primary training site, or at a different location. (In the Location column, indicate on-site for primary location or the name of the facility where the equipment is located if off-site.) For facilities that are not on-site, please describe the situation and availability in the space at the end of this section. Please also provide the manufacturer and model of the unit for electrodiagnostic and imaging equipment.

	Available?		Location of equipment?
	Yes	No	(On-site or list site name)
a) Standard radiological equipment	X		On-Site – Toshiba Sedecal
b) Ultrasonographic equipment	X		On-Site – GE Logiq S8Vet
c) Clinical Pathology capabilities: (includes CBC, serum chemistries, blood gases, urinalysis, cytology, parasitology, microbiology, and endocrinology)	X		On-Site - Antech stat lab
d) Electrocardiography	X		On-Site - Surgivet
e) Blood Pressure Measurement	X		On-Site - Parks Doppler/Surgivet
f) Radiation Therapy Facility	X		On-Site – Varian Trilogy
g) Veterinary Library w/Literature Searching Capabilities	X		On-Site
h) Computerized Medical Records w/Searching Capabilities	X		On-Site
i) Medical Library w/Literature Searching Capabilities	X		On-Site
j) Electromyography and nerve conduction velocity testing	X		On-Site - Cadwell
k) Evoked Response Equipment	X		On-Site - Cadwell
l) Electroencephalography	X		Off-Site - UPenn
m) Computed Tomography	X		On-Site – GE Lightspeed
n) Magnetic Resonance Imaging (include field strength)	X		On-Site - GE Brivo 1.5T

If any of the above equipment or facilities is available off-site, please explain how the resident can access them for case management, research, or study, *especially with respect to the use of imaging equipment*:

19. Describe the formal conferences, such as clinicopathologic conferences, journal clubs, or seminars that are held on a regular basis. Please provide a description and the typical schedule for these:

The resident will be expected to attend one major conference per year (preferably ACVIM). Resident will also attend neurosurgery conference as well at Brain Camp once during the residency.  
Journal club is held weekly. Resident will be expected to attend all local CE programs when possible.

20. Detail the teaching responsibilities expected of the resident during the training program. This may include lectures in departmental courses for veterinary students, grand rounds presentations, presentation of papers or seminars at conferences, or participation in continuing education programs.

The resident will present several times per year including lectures to : house officers (interns and fellow residents), veterinary technicians, continuing education events for referring veterinarians and at a major meeting (likely ACVIM).

21. How many major veterinary medical or medical meetings are each resident able to or expected to attend during his/her training program?

None	One	Two	> Two
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

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22. Are one or more publications required as part of the training program?

Yes	No	Number
<input checked="" type="checkbox"/>	<input type="checkbox"/>	At least 1

Comments:

The resident will be required to complete a research project suitable for publication in one of the major veterinary journals. Resident will choose a topic during their first year. Scope of project will likely involve case series or retrospective study. The opportunity for basic science research will also be available to the resident.
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23. Please describe any additional pertinent information that the Residency Training Program should consider in its evaluation of this Training Program.

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**Please note, any Program Director or Candidate that significantly changes or alters this Residency Training Program before completion must notify ACVIM, in writing, before the changes are made to ensure that the proposed changes are approved.**

Significant changes could include, but are not limited to:

- transferring from one program to another
- alterations in program duration
- switching to a 'dual board' program
- enrolling in an institutional graduate program
- change of Program Director or Resident Advisor

**I verify that the above information is an accurate reflection of this Residency Training Program.**

Per the Certification Manual, each year, the Program Director (PD) must certify to the RTC/ RTCC and ACVIM, in writing, that they have read the ACVIM Certification Manual and understands their role in residency training.



**Checking this box is an indication I have read the ACVIM Certification Manual and understand my role in the Residency Training Program.**