

Part One

New applications for ACVIM Residency Training Programs must be received by the Residency Training Committee (RTC) 90 days prior to any residents beginning training. Before completing this form, please review the general and specific requirements for Neurology Residency Training Programs in the ACVIM Certification Manual (CM). The current version of the CM is available on the ACVIM website at www.ACIVM.org.

Prior to making significant changes in a Residency Training Program, approval of the ACVIM and Neurology RTC must be obtained. The Candidate and/or Program Director 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 the following: changes in Program Director or advisors, transferring from one program to another, alterations in program duration, locations of secondary site training, switching to a 'dual board' program, or enrolling in an institutional graduate program.

Notice: The data collected in this form is necessary both for the ACVIM to maintain its accreditation as a Registered Veterinary Specialty Organization and also is required for renewal of the residency training program. Some of the data collected is required of every specialty and some is specific to the specialty of Neurology.

For multi-site residency programs: To ensure uniformity of training and compliance with current CM requirements, training programs that include multiple sites must provide detailed information regarding supervision and facilities available at each specific site(s). Multi-site programs, if any, will be addressed by the Program Director in Part Two.

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 (ECVN) for at least 5 years with 3 years' experience training residents

Program Director Contact Information:

Work Phone:	<input type="text" value="(540) 231-2430"/>
E-mail:	<input type="text" value="tepdvm@vt.edu"/>
Mailing Address:	<input type="text" value="SA Clin. Sci., VA-MD Regional CVM
Phase II, Duckpond Dr.
Blacksburg, VA 24061-0442"/>

1. Location of Sponsoring Institution (Primary Site of Training Program):

Primary Site Location:	Length of Training Program:
<input type="text" value="Virginia Maryland College of Veterinary Medicine (VT)"/>	<input type="text" value="3 year"/>

2. Resident Advisor(s): Must be a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of the ECVN and boarded for at least one year. Each RA advises and supervises no more than two residents at one time.

<input type="text" value="John Rossmeisl
Avril Arendse
Theresa Pancotto"/>
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3. Supervising Diplomates: Must be a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of the ECVN. The supervising diplomate must be active in the practice of the specialty and must maintain clinical competency in the field. **The sponsoring**

institution must provide resident with onsite presence of any combination of at least two ACVIM or ECVN Neurology Diplomates with full-time clinical responsibilities.

John Rossmeis - Neurology, SAIM
 Avril Arendse - Neurology
 Theresa Pancotto - Neurology

4. All Diplomates of ACVIM or ECVIM responsible for supervision of clinical training who specialize in areas other than Neurology.

Name and Specialty	Comments
Jonathan Abbott - Cardiology Sunshine Lahmers - Cardiology W. Scarratt - LAIM Virginia Buechner-Maxwell - LAIM Harold McKenzie - LAIM Sharon Witonsky - LAIM Katherine Wilson - LAIM Rebecca Funk - LAIM Nikolaos Dervisis - Oncology Shawna Klahn - Oncology Timothy Bolton - SAIM Michael Leib - SAIM William Monroe - SAIM David Panciera - SAIM Stephanie DeMonaco - SAIM Michele Borgarelli - SAIM David Grant - SAIM	

5. 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	Start date (mm/dd/yyyy)	End Date (mm/dd/yyyy)	Resident Advisor Name*
Adam Drury	7/16/18	7/15/21	Theresa Pancotto



RESIDENCY TRAINING PROGRAM REGISTRATION
2019-2020
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:

Program Director Email Address:

Must be a Diplomate of ACVIM in the Specialty of Neurology or an approved Diplomate of the European College of Veterinary Neurology (ECVN) for at least 5 years with 3 years' experience training residents

Name of Sponsoring Institution (Primary Site):

1. Length of Training Program:

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

2. Advanced Degree:

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

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

Residents take didactic courses appropriate for their area of interest for years one and two (statistics, neuropath, neurophysiology, grant writing, seminar/speaking). They must identify a graduate committee by the end of first semester, develop a thesis proposal by the end of the first year, and identify funding by the fall semester year 2. The project is completed during designated off blocks throughout the next two years, and defended during the last semester of the residency. PhD students complete the PhD prior to the 3-year clinical residency and are in a different application process.

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

Name of Diplomate(s)	Specialty Certifying Body	Comments

There are no off-site supervising diplomates		

4. 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 Diplomat(e)s	Specialty Certifying Body (ACVP or ECVP)	Clinical or Gross	Comments
Kevin Lahmers	ACVP	Gross	
Geoffrey Saunders	ACVP	Gross	
Tanya LeRoith	ACVP	Gross	
Tom Cecere	ACVP	Gross	
Sheryl Coutermarsh-Ott	ACVP	Gross	
Kurt Zimmerman	ACVP	Clinical	
Katie Boes	ACVP	Clinical	
Sarah Barrett	ACVP	Clinical	

5. 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 Diplomat(e)s	Specialty Certifying Body (ACVR or ECVDI)	Comments
Greg Daniel	ACVR	
Martha Larson	ACVR	
Kemba Clap	ACVR	

6. 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 Diplomat(e)s	Specialty Certifying Body	Comments
Otto Lanz	ACVS	
Sabrina Barry	ACVS	Part Time
Noelle Muro	ACVS	
Dominique Sawyere	ACVS	
Ian Herring	ACVO	
Roxy Rodriguez	ACVO	
Natalia Henao-Guerrero	ACVAA	
Noah Pavlisko	ACVAA	
Jeff Wilson	ACVAA	
William Swecker	ACVN	
Megan Shepherd	ACVN	
Sherrie Clark	ACT	
Julie Cecere	ACT	
Heng Tam	ACVD	

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.

7. 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. The resident must complete the residency in blocks of time no less than four weeks in length and attend a minimum of 20 weeks of training per year. The training period may not exceed a total of five years.

8. 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:

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

Independent Study			
Vacation	2	2	2
Total	52	52	52

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:

	Year I	Year II	Year III
Medical Neurology *	30	35	36
Neurosurgery			
Neurology/Neurosurgery - Direct Supervision	30	35	27
Neurology/Neurosurgery - Indirect Supervision			9
Internal Medicine	6	3	
Clinical Pathology			
Radiology			
Neuropathology			
Other Rotation (please list the name of each rotation):			
Other: ACVS	3		
Other:			
Research	8	12	12
Independent Study	3		2
Vacation	2	2	2
Total **	52	52	52

* 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.

**The totals should add up to 52 weeks.

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

At least one faculty is assigned to clinic duty each block. They remain on the floor all day unless they have teaching obligations in the veterinary curricula. Faculty review cases multiple times during the day as necessary. Morning clinical rounds are 1:1 with faculty:resident. Evening rounds involve the entire service and include an in depth discussion of each case seen and in hospital as well as review of diagnostic results for that day and treatment

plans for the next day. Faculty or senior residents will lead the discussion.

Morning rounds are didactic and are geared towards students. Additional ACVIM didactic rounds are weekly on Fridays.

10. The neurology specialty requires that the resident spend at least 50 hours during the residency in the following rotations: Imaging, Clinical Pathology, Neuropathology, Electrodiagnostics and Neurosurgery as well as participate in emergency duties on a rotational basis. A training hour (see CM 7.C.7) will be defined as a minimum of one (1) continuous hour of direct contact time with a supervising specialist in the other field. 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) to document proof of supervision for all required contact hours (imaging, clinical pathology, neuropathology, electrodiagnostics and neurosurgery) in rotations other than neurology.** One 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.

Imaging: 50 hours with a Board-certified radiologist interpreting images, learning and evaluating the results of special imaging techniques and attending imaging rounds or seminars.

Resident is assigned to evaluate all cases on the neurology service. All special procedures (Myelography, CT, and MRI scans) are interpreted by the resident in concert with both the radiologist and neurologist on duty. A dedicated graduate course (Alternate Imaging) is required as part of the master's program. Radiology rounds are conducted with available radiologists, neurologist, radiology residents, and neurology residents on a bi monthly basis. A week long radiology rotation is also included during years 1 and/or 2.

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

There are three clinical pathologists on faculty. They routinely assist residents in interpretation of laboratory data and cytological specimens on a daily or weekly basis. A clinical pathology course is available every other year that can be/is taken as part of the master's program. A week long clinical pathology rotation is also included during years 1 and/or 2.

Neuropathology: 50 hours with a board-certified anatomic pathologist devoted to review of veterinary neuropathology. This time may be spent in lecture series, seminars, or a formal training program approved by the Residency Training Committee.

Residents are required to take a graduate level neuropathology course each semester as part of their masters degree requirement. The following course requires 30 contact hours between student and board certified pathologist. This course is taken every semester during the 3 year program. (180h) Additionally residents can participate in weekly pathology rounds if they have sent a case to surgical histopathology or necropsy.

BMVS 5794 - Clinical Neuropathology

This course uses necropsy tissues of clinical cases to present the mechanisms involved in neurological disease of animals. Gross, Microscopic, and radiologic approaches will be employed. Emphasis will be placed upon the correlation of clinical and pathological findings. May be repeated. Pre: Instructor's approval required. Credit hours 1

Lectures hours 1 Levels(s) Graduate Instruction type Lecture

Electrodiagnostics: 50 hours devoted to reviewing, evaluating, and interpreting different aspects of electrodiagnostics; including but not limited to, electroencephalography, electromyography, motor and sensory nerve conduction study and evoked potentials. 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 electrodiagnostic experience.

The resident has hands on experience with EMG, MNCV, Spinal Cord and Cortical Evoked Potentials, BAER, and EEG. A graduate training course is also offered as part of the masters where theory and interpretation of different cases are emphasized. Residents are also involved with interpretation of ERGs performed by the ophthalmology service.

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/ECVN]. 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.

The neurology service manages both medical and surgical cases on a daily basis. Acute thoracolumbar cases (likely type I IVDD) are seen on an rotating weekly schedule by soft tissue surgery/orthopedic surgery and neurology. Therefore, the resident is on call two weeks out of three for these types of cases. The neurology service routinely receives all animals with intracranial disease, all tetraparetic/plegic dogs, and all feline neurological cases. The neurology resident assists with all neurosurgical procedures. Most are performing routine laminectomies and ventral slot procedures by the second year on their own. Surgical stabilization procedures and craniotomies are typically accomplished with assistance from the neurologist by the end of the third year

Emergency Duty: Participation in emergency service on a rotational basis; cases seen may be limited to neurology. Please provide a specific description of the type of participation.

The neurology service receives emergency cases primarily M-F as long as clinicians are not otherwise occupied (in surgery). In those instances of "urgent" cases or occupied clinicians, the cases may be seen by the triage/ER service. The neurology service may be consulted with during weekend emergencies and transferred if appropriate.

11. The neurology specialty 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 with at least one board-certified neurologist in attendance at each journal club meeting. Please explain how this requirement is met:

Journal Club is held every other Tuesday (Neurology Specific) and alternating Tuesdays (includes all Internal Medicine). Topic rounds for all ACVIM candidates are held every Friday morning. Additional intern/resident seminars are given 8 times per year.

12. 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. The advisor must provide written documentation of the review that will be signed by both advisor and resident. Please explain how this is accomplished:

At the end of each block, faculty fill out resident evaluations. Resident advisor meets with the resident every 6 months to go over these evaluations. Additional progress meetings occur with the residents masters' committee each semester to ensure adequate progression through the degree program and thesis.

13. The neurology specialty requires that the resident must complete a basic science or clinical research project that follows the scientific method approach and receives approval by the resident advisor (review CM section 7.E.5.c). 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.

A research (thesis) master's degree is a requirement of our program. Resident must select major professor and general area of interest by the end of the first semester, form a committee and submit a proposal for the project by the end of the second semester. The data is collected over the second year of the residents and the thesis written and defended during the third year.

14. 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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b) Ultrasonographic equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c) Clinical Pathology capabilities: (includes CBC, serum chemistries, blood gases, urinalysis, cytology, parasitology, microbiology, and endocrinology)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d) Electrocardiography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e) Blood Pressure Measurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f) Radiation Therapy Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In progress, expect opening in 2020; currently referred to NCSU or other
g) Veterinary Library w/Literature Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
h) Computerized Medical Records w/Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
i) Medical Library w/Literature Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
j) Electromyography and nerve conduction study testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
k) Evoked Response Equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
l) Electroencephalography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
m) Computed Tomography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
n) Magnetic Resonance Imaging (include field strength)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.5T at VTH; 3T available; Pet MR expected 2020

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 and electrodiagnostic equipment:

Resident can travel to external blocks during periods of independent study. Dr. Michael Nolan comes to VT once per year to provide a seminar on radiation oncology. We are in process of building a new facility in Roanoke that will offer RT and additional advanced imaging modalities. Expected to open in 2020.

15. Residents must attend formal teaching conferences, resident seminars, grand rounds sessions, medicine journal clubs, neurobiology classes, etc. Residents must participate in these activities an average of four times per month, regardless of their duty status. Please describe the formal conferences, such as clinicopathologic conferences, journal clubs, or seminars that are held on a regular basis.

Alternating Tuesdays – Neurology specific journal club/ACVIM internal medicine journal club
Intern/Resident Seminar – 12 per year, attended by Small Animal Clinical Sciences Department, residents, and students.

On years when 2 residents are enrolled, additional semester long courses are offered in the area of electrophysiology, neurophysiology, clinical pathology, radiology, and neuroanatomy. These are a part of the masters program and taught by neurology faculty and neuroscience faculty at the college.

16. The resident must give a presentation at a formal conference at least once per year. 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. Documentation of these presentations must be included in the neurology credentials packet of the resident.

Residents will present at the graduate school research day at least once in 3 years (often year 2-3). Resident is also encouraged to speak or present at SEVN or ACVIM or other national/regional conference. Residents deliver 1 hour lecture in our didactic veterinary curriculum during their 3rd year, if they have an academic interest. They lead morning rounds with clerkship students on a regular basis. Residents are required to present 4 seminars to department on a neurology related topic to the department.

17. A Neurology Residency Training Program must provide at least 40 hours per year of intensive formal review sessions for residents on topics covered in the General and Specialty Examinations. The requirement could be met in part by attending an ACVIM Advanced Continuing Education (ACE) course, the ACVIM Neuroscience Course (Brain Camp) or an ACVIM Forum. Please describe how these opportunities will be made available to the resident.

Every Wednesday – Neuropathology course/rounds
Every Friday – ACVIM Topic Rounds (all sub-specialties)
12 Fridays/year – Intern/Resident Seminar
Once per month/every other month – Topic Radiology Rounds
ACVIM Neuroscience course – Once in three years

18. 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: Residents are supported for ACVIM attendance year 2 and 3. Resident support exists for attendance to the neurology specialty summer course when delivered in the US. Most residents are also supported to attend at least one SEVeN conference during their 3 years.

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

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

Comments: Although not required, most residents have published one paper by the time they complete the program.

20. Please describe any additional pertinent information that the Residency Training Program should consider in its evaluation of this Training Program.

In addition to the specialties described, our residents learn about physical rehabilitation with their patients. They are actively involved with therapy for in patients as we do not have the PT staff to complete treatments without assistance.

Please note: The Program Director must report substantive changes within a Neurology RTP affecting compliance with Specialty of Neurology requirements to the Neurology RTC Chair within 14 days. This must be done in writing through the ACVIM office before the changes are made to ensure they are acceptable to the Neurology RTC.

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.