

Part One

New applications for ACVIM Residency Training Programs must be received by the Residency Training Committee 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 most current version of the CM is available on the ACVIM website at www.ACVIM.org. If there is a discrepancy between this form and the CM, the CM will be considered correct, however, please contact the ACVIM office or the Residency Training Committee Chairperson for clarification.

Prior to making significant changes in a Residency Training Program, approval of the ACVIM and Neurology Residency Training Committee must be obtained. The Candidate and/or Program Director must notify ACVIM, in writing. Significant changes could include, but are not limited to: 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: This form contains questions for three separate purposes; data collection that ACVIM must maintain for its accreditation as a specialty college; data collection for each specialty to evaluate what is appropriate for residency programs; and data collection to evaluate this Residency Training Program for renewal. It is important that all questions be answered accurately and completely, even if the answer to a specific question is not essential for a program's renewal.

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, are listed 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)

Program Director's Contact Information:

Work Phone:

E-mail:

Mailing

Address:

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

Primary Site and Length of Program:

Multi-site programs, if any, are listed in Part Two.

2. Resident Advisor(s): Must be a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of ECVN.

William Bush Daniel Cuff

3. Supervising Diplomates in Neurology: Must be a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of ECVN.

Joli Jarboe - Neurology
William Bush - Neurology
Lisa Lipitz - Neurology
Ashley Bensfield - Neurology

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

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, Dates of Program, (Resident Advisor)

Sarah Trub 7.15.15 - 7.15.18 (Daniel Cuff)
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Please note, any Program Director or Candidate that significantly changes or alters their 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



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: 2/19/18

Program Director Name: William Bush, VMD, DACVIM

(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): Bush Veterinary Neurology Service

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.

Rockville Hope Center, Dan Cuff, DVM, DACVIM (Neurology) and Lisa Lipitz, VMD, DACVIM (Neurology), 20% of her time, time spent in Rockville is for clinical neurology rotations

2. Length of Training Program:

2 years Yes []
3 years [x]
Other -provide details []

3. Advanced Degree:

Masters: Yes [] No [x] Optional []
PhD: Yes [] No [x] Optional []

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

[Empty text box for explanation]

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
Brandi Hurwitz, SAIM Julie Pera, SAIM Ed Breitswerdt, SAIM	Weekly rotations at Hope Center Rockville Weekly rotations at Hope Center Rockville Weekly rotations at NCSU

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
Casey LeBlanc Molly Church	Clinical Gross/Histo	<ul style="list-style-type: none"> - Off site, resident will spend 50 hours on clinic about 45 minutes away in Springfield, VA. - Offsite, UPENN, 1 week spent at PENN reviewing slide sets and attending rounds, monthly attendance of neuropathology rounds at UPENN

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
Matthew Paek	Off site, resident will spend 50 hours on clinic about 1 hour away in Rockville, MD

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
Bruce Hansen Jim Taylor Michelle Armour Kathy Michel Dawn Booth Kara Kolster	Dermatology Surgery Ophthalmology Nutrition Pharmacology Theriogenology	On site On site On site UPENN, phone/email Auburn, phone/email Richmond, VA, phone/email

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	Diplomate? (Yes or No)
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	(mm/dd/yyyy)	
Martin Young	July 2011	Y
Devon Hague	July 2012	Y
Casey Neary	July 2013	Y
Dan Cuff	July 2014	Y

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)
Sarah Trub	3	7/15/2015	7/15/2018	Dan Cuff

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:

	Year I	Year II	Year III
Medical Neurology *			

Neurosurgery			
Neurology/Neurosurgery Direct Supervision	36	36	
Neurology/Neurosurgery - Indirect Supervision			34
Internal Medicine	4	2	2
Clinical Pathology	2		
Radiology	2		
Neuropathology		2	2
Other Rotation (please list the name of each rotation)			
		1	
	2	4	4
Research	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 *			
Neurosurgery			
Neurology/Neurosurgery - Direct Supervision	46	39	36
Neurology/Neurosurgery - Indirect Supervision			
Internal Medicine	1	2	0
Clinical Pathology	0	1	0
Radiology	0	0	1
Neuropathology	1	1	2
Other Rotation (please list the name of each rotation):			
Other:		1	
Other:			
Research	1	1	2
Independent Study	1	5	8
Vacation	2	2	2
Total *	52	52	52

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*The totals should add up to 52 weeks.

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

All Cases SOAP by resident, reviewed and discussed with Neurologist, at intake all cases examined by both resident and neurologist and the plan formulated with the owner, all test results are reviewed by resident and neurologist.

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) 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.

With Dr. Paek – Review with radiologist of radiographs, ultrasounds, CT scans, MRI and didactic rounds, 50 hours MRI course at Brain Camp
Review of MRI, CT and radiograph reports throughout clinic.

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

With Dr. LeBlanc – double headed scope and teaching slide sets focusing on CSF cytology, blood smear, bone marrow and other tissue aspirates, biopsy

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.

With Dr. Church – months neuropathology rounds (20 hours) plus additional week of slide review of brain and spinal cord histopathology gross pathology review/rounds

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.

With Dr. Cuff, Dr. Young, Dr. Lipitz, Dr. Barker and Dr. Jarboe – 2 surgery labs/year plus cadaver work about 1 time/month (supervised), plus assisting or being on neurosurgery cases (about 100 cases/year)

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:

We have Cadwell Sierra Wave and Cadwell Easy 2 EEG and perform BAER, MCV, Late Wave, repetitive stim, EMG and EEG on regular basis. Dr. Brewer supervises muscle/nerve studies with Dr. BUS EEG. EEG interpreted by outside expert Mark Stecker, MD PhD. Colette Williams lectures and runs a hands-on laboratory about every other year.

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:

We have rounds with resident, intern and all neurologists (Bush, Bensfield, Cuff, Jarboe, Neary, Barker, Young, Akin, Rivera, Lipitz and Higginbotham) 44 times/year for 45 minutes.

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:

Program director and advisor solicit feedback from staff and other neurologists regarding clinical performance. Benchmarks for achieving hard skills are discussed prior to residency and then evaluated every 6 months. If not meeting expectation/time line then additional support is provided.

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.

Project selected in the first 3 months of first year, project design and end points established, peer reviewed, intramurally, bimonthly discussions and updates with residency supervisor and program director.

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
b) Ultrasonographic equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
c) Clinical Pathology capabilities: (includes CBC, serum chemistries, blood gases, urinalysis, cytology, parasitology, microbiology, and endocrinology)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site and via reference lab with 2x/day pick up
d) Electrocardiography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
e) Blood Pressure Measurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Doppler, Oscilometric
f) Radiation Therapy Facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Gamma Knife
g) Veterinary Library w/Literature Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Off site through

- h) Computerized Medical Records w/Searching Capabilities
- i) Medical Library w/Literature Searching Capabilities
- j) Electromyography and nerve conduction velocity testing
- k) Evoked Response Equipment
- l) Electroencephalography
- m) Computed Tomography
- n) Magnetic Resonance Imaging (include field strength)

		ACVIM/TAMU
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Onsite, Intravet
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Off site, through ACVIM/TAMU
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Sierra Wave
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Sierra Wave
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Easy 2 EEG
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, 4 slice
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, 1.5 T GE

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:

Weekly – 2 hours textbook or topic review (multiple articles)
 3-4 times a month journal club
 8 Topic Rounds/year (held in tandem (skype) with VMRCVM Neurology dept.)
 Twice per year - cadaver surgical laboratory
 Twice per year – electrophysiology laboratory
 Monthly – neuropathology rounds at UPENN

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.

Residents teach rotating small animal interns, rotating fourth year students, give a grands in their second year, provide intern rounds at local referral practice, provide lectures at local CE events.

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 checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: ACVIM in 2nd and 3rd year, Brain Cam, local D.C. Academy

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

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

Comments: Case report or series

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

We perform shunt and COMS surgery, fracture repair at all levels of spine with pins/PMMA or SOP system, craniotomy, muscle/nerve biopsy, disk surgery, Jarboe and Brewer hold neurosurgery certificates. We perform about 175 surgical procedures per year. We pay for residents to attend Brain Camp for entire time providing them additional hours and training in radiology and pathology as well as general neurology/neurosurgery.

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.