



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

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:	<input type="text" value="(602)437-1488"/>
E-mail:	<input type="text" value="karen.kline@vscofseattle.com"/>
Mailing Address:	<input type="text" value="20115 44th Ave West
WA 98036"/>

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.

Karen Kline Alix Partnow

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

[Karen Kline - Neurology](#)
[Alix Partnow - Neurology](#)
[Jeremy Shomper - Neurology](#)

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

[Heidi Maclean - Cardiology](#)

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)

Lara Curtis 7.1.16 - 6.30.19 (Karen Kline)
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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



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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: 2/14/18

Program Director Name: Karen L Kline

(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): Veterinary Specialty Center of Seattle

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.

Neuropathology Training will be done at the University of Missouri with Dr. Gayle Johnson
Clinical Pathology Training will be done off-site at Washington State University with Dr. Wardrop

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:

N/A

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 Diplomat(e)s	Comments
None	

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 Diplomat(e)s	Clinical or Gross	Comments
Gayle Johnson, DVM, PhD, DACVP Katherine Wardrop, DVM, DACVP	Gross	Out rotations performed with the resident at each site will be expected to fulfill the requirements for clinical pathology and neuropathology training. Clinical pathology will be completed in 2018 and neuropathology in 2019.

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 Diplomat(e)s	Comments
Tori McKlveen, DVM, MS, DACVR	

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 Diplomat(e)s	Specialty	Comments
Mark Garneau, DVM, DACVS Marina Manashirova, DVM, DACVS Rafaella Corsi, DVM, DACVECC Anya Gambino, DVM, DACVECC	Surgery Surgery ECC ECC	

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)
Devin Berthiaume, DVM, MS	2015	Yes

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)
Lara Curtis, DVM	3	7/1/16	7/1/19	Karen Kline Alix Partnow Jeremy Shomper

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.

N/A

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:

	<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 -</i>			34

Indirect Supervision			
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	42	33	34
Neurology/Neurosurgery - Indirect Supervision	0	1	1
Internal Medicine	2 weeks	2 weeks	0 weeks
Clinical Pathology	0 weeks	2 weeks (> 50 hours)	0 weeks
Radiology	0 weeks	2 weeks (> 50 hours)	0 weeks
Neuropathology	0 weeks	0 weeks	2 weeks (> 50 hours)
Other Rotation (please list the name of each rotation):			
Other: Surgery	3 weeks	2 weeks	
Other:			
Research	1 week	2 weeks	3 weeks
Independent Study	3 weeks	7 weeks	11 weeks
Vacation	1 week	1 week	1 week
Total *	52 weeks	52 weeks	52 weeks

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*The totals should add up to 52 weeks.

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

Cage side rounds are conducted daily in the morning with the hospital specialists as well as the interns, ECC residents and the overnight ER doctor. After these rounds, specific neurologic cases are discussed with the supervising Neuro Diplomate(s) and a plan is made for further diagnostics and case management. At the end of the day, within the neurology department, cases are reviewed and a treatment plan is implemented for the evening. In the evening, the overnight ER doctor is rounded by the resident on in-house neurologic patients and a treatment plan is discussed.

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.

The resident will have daily interactions with the on-site radiologist and the radiology department and interact with the radiologist regularly through case discussions, interpretation of radiographs, performance and interpretation of MRI, CT and myelographic images as well as other radiographic procedures to include CT and fluoroscopic guided biopsies and aspirates. Every other week MRI rounds will be conducted and will supplement the training of the resident. Additional rotations with the radiologist one on one will supplement the resident's training.

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

50 hours of clinical pathology training will be provided through an out rotation(s) at with board certified clinical pathologist Dr. Jane Wardrop at Washington State University CVM. The resident will have face to face contact with the Diplomate and will review clinical cases, slides and discuss disease processes.

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 seminars, rounds and have face to face discussion of neuropathology cases with Dr. Gayle Johnson, DACVP, at the University of Missouri CVM. Dr. Johnson has successfully trained numerous neurology residents in neuropathology (her specialty) and has done so through case discussions, microscopic discussion of cases as well as discussion of gross specimens. Attendance at the ACVIM Neuroscience course (Neurology Brain Camp) will help to augment neuropathology training. Attendance at rounds and conferences at the University of Washington Medical School campus in Seattle will augment neuropathology training.

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.

The resident will work directly under the supervision of Dr. Karen Kline, Dr. Alix Partnow (ACVIM Diplomate, Neurology), Dr. Mark Garneau, DACVS and Dr. Maraina Manashirova, DACVS, on select neurosurgical procedures. The training of the resident will involve supervised (direct and indirect) performance of neurosurgical procedures to include hemilaminectomies, ventral slots, dorsal laminectomies (lumbosacral and cervical), spinal fracture/luxation repair and craniotomies alone or with direct supervision of the Board certified neurologist or surgeon. Dr. Kline has performed numerous neurosurgical procedures and achieved her certificate in Neurosurgery through ACVIM. Dr. Partnow is Board certified in Neurology (ACVIM) and has performed numerous neurosurgical procedures and also will be assisting in training the resident. Dr. Garneau will be assisting the resident in the use of surgical implants for spinal fractures, luxations, lumbosacral stabilizations and atlantoaxial malformation surgeries as well as selected brain surgeries.

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:

The practice has a Cadwell Electrodiagnostic unit that is capable of performing EMG, NCV and evoked potentials such as BAER. Hands-on performance of the above procedures as well as didactic presentations on electrodiagnostics will be offered to augment training in the above areas as well as EEG. Out rotations at other institutions will also be used to supplement the training as well as instruction at Brain Camp.

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:

Neurology Text review/Journal Club held every other week for an hour each time as well as weekly selected text and literature reviews held on Wednesdays which are presented by the staff specialists, interns and residents. Neurology Morbidity and Mortality Rounds held once a month will also be held to help augment learning.

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:

Hospital wide evaluations of the resident will be conducted on an every 6 month basis and a formal review will be conducted every 6 months by the supervising neurology diplomates in charge of the resident's training. The resident will keep a log of the medical and surgical neurology cases that they have seen as well as the procedures that they have performed as a guide for further training and improvement.

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.

A research project will be decided upon within the first 12 months of the start of the residency. From that point, data will be accumulated and the resident directors will check in with the resident on a monthly basis to assess

progress on the project. It is expected that the research project be completed within 2 years of the inception of the project start.

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 Antech Diagnostics (off site), in-house Abaxis, NOVA Biomedical (blood gas), Heska Element HT5 Veterinary Hematology Analyzer, in-house microbiology incubator, fecals, urinalysis and cytology
d) Electrocardiography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
e) Blood Pressure Measurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
f) Radiation Therapy Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Off site Washington State CVM
g) Veterinary Library w/Literature Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
h) Computerized Medical Records w/Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
i) Medical Library w/Literature Searching Capabilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Off site University of Washington Medical School
j) Electromyography and nerve conduction velocity testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
k) Evoked Response Equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
l) Electroencephalography	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Off site Brain Camp
m) Computed Tomography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site GE
n) Magnetic Resonance Imaging (include field strength)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site 1.5 Tesla 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*:

Library at the University of Washington Medical School in Seattle would be accessible for study, research. 24 hour computer access to various veterinary publications on-line as well as VIN and PubMed available at VCA VSC (our hospital)

EEG and other specialized electrodiagnostic procedures will be available via an out-rotation basis where it is available such as at Washington State University, and at Brain Camp (didactic lectures on theory and application). Radiation therapy available through radiation therapy facility at Washington State University CVM. The resident will be involved in once weekly alternating neurology journal club/text review as well as monthly morbidity and mortality rounds and didactic rounds (discussion of topics in neurology and neurosurgery) that would be held every other Wednesday morning. Once weekly clinician presented seminars and intern/resident journal/text review offered through the neurology, medicine and surgical services is also attended by the resident.

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 involved in once weekly alternating neurology journal club/text review as well as monthly morbidity and mortality rounds and didactic rounds (discussion of topics in neurology and neurosurgery) that would be held every other Wednesday morning. Once weekly clinician presented seminars and intern/resident journal/text review offered through the neurology, medicine and surgical services is also attended by the resident. The resident will be expected to teach the rotating interns as they rotate through the neurology service. The resident will also be responsible for presenting lectures to the interns, visiting preceptors and guests. They will also be expected to present lectures for our annual continuing education conference held in the fall as well as continuing education presentations at local practices and at a national meeting such as ACVIM (presentation of research abstract or poster).

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 be expected to teach the rotating interns as they rotate through the neurology service. The resident will also be responsible for presenting lectures to the interns, visiting preceptors and guests. They will also be expected to present lectures for our annual continuing education conference held in the fall as well as continuing education presentations at local practices and at a national meeting such as ACVIM (presentation of research abstract or poster).

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: _____

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

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

Comments: _____

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

Dr. Kline has trained previous residents at Iowa State University as well as VSC of Seattle (1) and these residents have gone on to become Board certified. Dr. Partnow has also trained 1 resident at VSC of Seattle who has become Board Certified. This program will offer a broad perspective on the field of veterinary neurology with emphasis on both the private practice and academic worlds of veterinary neurology.

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

X 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.

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