



**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="(509) 432-6763"/>
E-mail:	<input type="text" value="avchen@wsu.edu"/>
Mailing Address:	<input type="text" value="Clinical Sciences, CVM"/>
	<input type="text" value="PO Box 647010"/>
	<input type="text" value="WA 99164-7010"/>

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.

Annie Chen-Allen Hillary Greatting

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

Annie Chen - Neurology
Hillary Greatting - Neurology

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

Rance Sellon - SAIM and Oncology
Lynne Nelson - SAIM and Cardiology
Katrina Mealey - SAIM
Jennifer Slovak - SAIM
Jillian Haines - SAIM
Janean Fidel - Oncology
George Barrington - LAIM
Steven Parish - LAIM
Debra Sellon - LAIM
Jenifer Gold - LAIM
Andrw Allen - LAIM
Macarena Sanz - LAIM
Pamela Lee - 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)

Tom Jukier 7.1.15 - 7.1.18 (Annie Chen-Allen) Jessica Chavera 7.1.17 - 7.1.20 (Annie Chen-Allen)

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:

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 GIG 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.

2. Length of Training Program:

	Yes
2 years	<input type="checkbox"/>
3 years	<input checked="" type="checkbox"/>
Other -provide details	<input style="width: 500px; height: 20px;" type="text"/>

3. 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 are enrolled in the WSU graduate school while concurrently doing a 3-year neurology residency. Residents have to maintain a GPA of 3.0 or above in order to remain in the WSU graduate school. The thesis

master's degree is in Veterinary Medicine, and residents are required to take specific courses during the 3 year period. Residents are enrolled in about 12-16 hours per semester. Credits are given for hospital rotation, neurology journal club, didactic courses in clinical neurology, research, seminar and outside elective courses. Three credit hours in statistics are required. The master's degree requires a completion of a project and a defense / formal presentation prior to finishing residency / degree. A manuscript/thesis is submitted to the master's committee prior to defense. PhD is possible if resident is able to find a PhD advisor within the college. The preliminary course work is done within the 3 year residency and the rest of the PhD requires approximately another 3 years post-residency work.

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
N/A	None off site

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
Jane Wardrop	Clinical	
Cleverson Souza	Clinical	
Timothy Baszler	Gross	
Kevin Snekvik	Gross	
Gary Haldorson	Gross	
Danielle Nelson	Gross	
Josh Ramsay	Gross	
Chrissy Eckstrand	Gross	
Allan Pessier	Gross	
Kyle Taylor	Gross	

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
Greg Roberts Tom Wilkinson John Mattoon Ashley Hanna	

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

Boel Fransson	ACVS	Surgery
Bonnie Campbell	ACVS	Surgery
Steve Martinez	ACVS	Surgery
William Dernell	ACVS	Surgery
Tina Owen	ACVS	Surgery
Tamara Grubb	ACVA	Anesthesia
Steve Greene	ACVA	Anesthesia
Robert Keegan	ACVA	Anesthesia
Marten Sanz	ACVA	Anesthesia
Katrina Mealey	ACVCP	Clinical Pharmacology
Ahmed Tibary	ACVT	Therio
Terri Alesio	ACVO	Ophthalmology
Linda Martin	ACVECC	Critical Care
Tandi Ngwenyama	ACVECC	Critical Care

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)
Alexandra Korn (Sasha Dixon)	7/2017	Yes
Dan Krull	7/2014	Yes
Heather Wright	7/2012	Yes
Jeanne Harris	7/2010	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)
Jessica Chavera	3	7/2017	7/2020	Annie Chen-Allen
Tom Jukier	3	7/2015	7/2018	Annie Chen-Allen

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 General Information Guide (GIG) 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 GIG) 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	38	32	26
Neurology/Neurosurgery - Indirect Supervision			4

Internal Medicine	4		
Clinical Pathology	1	1	
Radiology	1	1	
Neuropathology			
Other Rotation (please list the name of each rotation):			
Other: Surgery	2		
Other: Cardiology		2	
Research	4	10	10
Independent Study		4	10
Vacation	2	2	2
Total *	52	52	52

*The totals should add up to 52 weeks.

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

Clinical rounds start at 8:15am each weekday morning. The boarded neurologist, residents, and fourth year students meet to go over patients. After patient rounds, we have an hour of topic rounds with the students. Topic rounds are lead by either the boarded neurologist or the residents. Topic rounds include neurolocalization, seizure management, head traum, vestibular disease, micturition/bladder management..etc. There are also late afternoon patient rounds each weekday to go over cases for that day and to formulate a plan for the following day.

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.

Residents will be scheduled to rotate onto the radiology service to train under board-certified radiologists for 50 hours (two weeks of clinical service). While on the neurology clinical service, residents will also work closely with board certified radiologists in interpreting radiographs, myelograms, MRIs and CTs of the nervous system on a case by case basis.

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

Residents will rotate onto our clinical pathology service to train under the supervision of board-certified clinical pathologists for 50 hours (two weeks of clinical service). Residents will also work closely with board certified clinical pathologists in interpreting blood work, cerebrospinal fluid cytology, and surgical tissue cytology on a case by case basis.

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.

Formal, college-wide neuropathology conferences are held by our pathology department once a month for an hour to go over neuropathology cases (12 contact hours per year). Residents will also have the opportunity to spend two hours per week for 4 weeks with the pathology residents reviewing pathology of the nervous system in a formal class format (VPA 592) taught by boarded veterinary pathologists (8 contact hours). Additionally, the boarded neurologist will provide a semester course on neuropathology review (VMS 585). This course will meet one hour a week for 16 weeks (16 contact hours).

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.

Our clinical neurology service is a surgical service. We are responsible for all of the neurosurgeries for the hospital. The residents have primary surgical experience with hemilaminectomies, ventral slots, and muscle and nerve biopsies under the supervision and support of the boarded neurologists. The amount of primary versus secondary involvement in craniectomies, vertebral stabilizations and tumor resections depends on their surgical development during the residency. Typically by the end of the residency, our residents would have had some primary surgical experience with craniectomies, vertebral stabilizations and tumor resections. We perform on average 2 surgeries a week. We also hold 1-2 neurosurgery cadaver labs per year to further the residents neurosurgical skills.

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:

This is taught to the resident by performing EMG, MNCV, F-waves and BSEP as needed on clinical patients. The residents are responsible for performing and interpreting these studies under the supervision of a boarded neurologist. Electrodiagnostics (EMG, NCV, F-waves, BSEP, SSEP, MEP, H-reflex, EEG, ERG) and their clinical application are also taught through a didactic course held by the boarded neurologists (VMS 585). This course is offered at least one semester out of each resident's residency program. This course meets one hour a week for 16 weeks (16 contact hours).

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:

Weekly neurology journal club is held every Tuesday morning throughout the residency. The residents meet with the boarded neurologists to critically review the scientific literature.

Monthly neurosurgery journal club is held on the first Tuesday of every month throughout the residency. The residents meet with boarded neurologists and surgeons to critically review the scientific literature.

Residents are also expected to review the literature on a case by case basis. They are expected to review articles that are pertinent to their cases and discuss them as needed with the boarded neurologists

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:

We conduct official evaluations (both written and oral) on each resident’s performance every 6 months. We also have service meetings at least once every 6 months to discuss upcoming projects, reading progress, study progress and upcoming goals for the residents and for the service.

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 residents are required to pursue a thesis Masters concurrently with the residency. For the Masters, the resident is required to complete a scientific research project or a clinical investigative project. A manuscript and thesis on their project in submission format along with an oral defense is required. The resident will be required to form a master's committee (typically 3-4 faculty members) within the first 6 months of the start of the residency. The boarded neurologist is usually the chair of the committee. The committee will meet every 6 months to evaluate project progress. The resident will also enroll in a required graduate grant writing course that helps with grant preparation during the spring semester of his/her first year. The resident will submit the grant for either intra or extramural funding. Every year, WSU College of Veterinary Medicine offers graduate grant funding up to \$7000 per project. We hope to have funding secured and have the entire second year to complete the study. The third year of the residency is used for data analysis, manuscript preparation and master's defense. The residency certificate will not be issued until the resident has completed the masters degree requirements.

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, Phillips
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
d) Electrocardiography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Mylab
e) Blood Pressure Measurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
f) Radiation Therapy Facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Phillips SL 15 linac
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
- j) Electromyography and nerve conduction velocity testing
- k) Evoked Response Equipment
- l) Electroencephalography
- m) Computed Tomography
- n) Magnetic Resonance Imaging (include field strength)

<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Caldwell Sierra Wave
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site, Caldwell Sierra Wave
<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On Site, Toshiba 16 slicer
<input checked="" type="checkbox"/>	<input type="checkbox"/>	On Site, Phillips Gyroscan 1.0T

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:*

N/A

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:

Every semester:

- Neuropathology conference – held by our pathology department, supervised by boarded veterinary pathologists, one hour session, once a month (first Thursday of every month, 4pm)
- Neurology Journal Club – led by boarded neurologists, one hour session, once weekly (Tuesday, 8am)
- Neurosurgery Journal Club - led by boarded neurologists and surgeons, one hour session, once monthly (first Tuesday of every month, 8am). Neurosurgery JC replaces Neurology JC for that week.
- Advanced Neurology Course (VMS 585) – each semester will have a designated topic (i.e. neuropathology, neuroradiology, neuroanatomy, electrodiagnostics...etc.), course led by boarded neurologists, one hour session, once weekly (Thursdays, 8am)
- Seminars in Clinical Medicine – each resident is required to give a 20 minute presentation on a topic of their choice once a semester to the CVM (Fridays, 8am)
- House officer rounds - residents take turn in presenting cases for other house officers and faculty in the hospital, one hour session, once weekly (Wednesdays, 8am)

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.

All residents are required to take the course, Seminars in Clinical Medicine. This course requires all residents to present a 20 minute oral presentation once a semester to the CVM. The residents are required to take this course 5 out of 6 semesters in order to complete their Master's degree. The residents are also strongly encouraged to submit research abstracts for ACVIM. Additionally, residents are given opportunity to give neurology didactic lectures to the third year veterinary students through VM552. The residents also is responsible for teaching the fourth year students on clinics. They will often lead the daily topic rounds for the fourth year veterinary students. There are also opportunities for residents to give presentations to different student clubs and organizations.

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

Comments: Residents should be able to attend the ACVIM Forum 2 of 3 years. Residents are also

encouraged to attend Brain Camp once during residency period.

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

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

Comments: A publication is required for the Master's Degree

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

None

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.