

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="(614) 292-2597"/>
E-mail:	<input type="text" value="moore.2204@osu.edu"/>
Mailing Address:	<input type="text" value="601 Vernon L Tharp St"/>
	<input type="text" value="601 Vernon L. Tharp St."/>
	<input type="text" value="Columbus, OH 43210"/>

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.

Sarah Moore
Ronaldo da Costa
Laurie Cook

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

Laurie Cook - Neurology
Ronaldo da Costa - Neurology
Sarah Moore - Neurology

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

John Bonagura - Cardiology and SAIM
Karsten Schober - Cardiology
Jaylyn Rhinehart - Cardiology
Catherine Langston - SAIM
Julie Byron - SAIM
Valerie Parker - SAIM
Jessica Quimby - SAIM
Adam Rudinsky - SAIM
Emma Warry - Oncology
Joelle Fenger - Oncology
Megan Brown - Oncology
William Kisseberth - Oncology

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)

Austin Kerns 7.15.15 - 7.15.18 (Sarah Moore)
Ashley Hechler 7.14.2016 - 7.15.2019 (Sarah Moore)
Daniella Vansteenkiste 7.15.2016 - 7.14.2019 (Ronaldo da Costa)
Carolyn Nye 9.2017 - 9.2020 (Ronaldo da Costa)

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:

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 style="width: 40px; height: 15px;" type="checkbox"/>
3 years	<input checked="" style="width: 40px; height: 15px;" type="checkbox"/>
Other -provide details	<input style="width: 600px; height: 20px;" type="text"/>

3. Advanced Degree:

	Yes	No	Optional
Masters:	<input checked="" style="width: 30px; height: 15px;" type="checkbox"/>	<input style="width: 30px; height: 15px;" type="checkbox"/>	<input style="width: 30px; height: 15px;" type="checkbox"/>
PhD:	<input style="width: 30px; height: 15px;" type="checkbox"/>	<input style="width: 30px; height: 15px;" type="checkbox"/>	<input checked="" style="width: 30px; height: 15px;" type="checkbox"/>

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

Veterinary Medicine 3-5 mornings per week between 7 AM and 9 AM in the fall, winter and spring quarters. Residents actively work on their research projects while they are on clinical duty. In addition, each resident is allocated 2-4 weeks off clinical duties on several occasions through the 3 year program (total of 24 weeks off) and may petition for an additional 2-4 weeks off clinics if necessary. Candidates may elect to pursue a combined PhD program, which is then a 5 year program which follows the traditional 3 year program with an additional 2 years devoted entirely to PhD research and graduate studies.

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
NA	NA

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
Dr. Michael Oglesbee, DVM, PhD Dr. Mary Jo Burkhard, DVM, PhD Dr. Judy Radin, DVM, PhD Dr. Paul Stromberg, DVM, PhD Dr. Steven Weisbrode, VMD, PhD Dr. Maxey Wellman, DVM, MS, PhD Dr. Ryan Jennings, DVM, MS	Gross Clinical Clinical Gross Gross Clinical Gross	All supervising diplomates listed are on-site

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
Dr. Wm. Tod Drost, DVM (DACVR) Dr. Eric Green, DVM (DACVR) Dr. Tiffany Schkeeper, DVM (DACVR) Dr. Eric Hostnik (DACVR)	All supervising diplomates listed are on-site.

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

Name of Diplomat(e)s	Specialty	Comments
Dr. Lynette Cole, DVM, MS Dr. Wendy Lorch, DVM, PhD Dr. Sandra Diaz, DVM Dr. Richard Bednarski, DVM, MS Dr. Phillip Lerche, DVM, PhD	Dermatology Dermatology Dermatology Anesthesia Anesthesia	All supervising diplomates listed are on-site

Dr. Turi Aarnes, DVM, MS Dr. David Wilkie, DVM, MS Dr. Anne Gemensky Metzler, DVM Dr. Eric Miller, DVM, MS Dr. Jonathan Dyce, MA, VetMB Dr. Mary McLoughlin, DVM, MS Dr. Kathleen Hamm, DVM, MS Dr. Stephen Jones Dr. Nina Kieves Dr. Ed Cooper, DVM Dr. Julien Guillaumin, DVM Dr. Page Yaxely Dr. Anusha Balakrishnan Dr. Valerie Parke	Anesthesia Ophthalmology Ophthalmology Ophthalmology Surgery Surgery Surgery Surgery Surgery and sports med ECC ECC ECC ECC Nutrition (and SAIM)	
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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)
Paula Martin-Vaquero	2013	Yes
Rachel Song	2015	Yes
Michele Provencher	2016	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)
Austin Kerns	3	7/15/2015	7/15/2018	Sarah Moore
Ashley Hechler	3	7/15/2016	7/2019	Sarah Moore
Daniella Vansteenkiste	3	7/15//2016	7/15/2019	Ronaldo da Costa
Carolyn Nye	3	9/21/2017	9/21/2020	Ronaldo da Costa

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.

NA

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 *	43	40	39
Neurosurgery			
Neurology/Neurosurgery - Direct Supervision	42	39	38
Neurology/Neurosurgery - Indirect Supervision	1	1	1

Internal Medicine	4	2	0
Clinical Pathology	0	2	0
Radiology	0	0	2
Neuropathology	0	0	2
Other Rotation (please list the name of each rotation):			
Other: Boards prep	0	4	4
Other:			
Research	3	2	2
Independent Study	0	1	1
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:

Rounds will be conducted on a daily basis. A brief morning round will be conducted to update the group on the condition of each patient and plans for in-house patients. A second, more comprehensive, late afternoon round will be conducted to discuss the cases seen during the day and plan the procedures for the next day. Residents will also routinely consult with their faculty individually after examining a case to discuss their findings, differential diagnoses, and diagnostic plan for that particular case

13. The neurology specialty requires that the resident spend at least 50 hours during the residency in Radiology, Clinical Pathology, Neuropathology and Neurosurgery. A Training Agreement Form must be completed and signed by the Diplomat 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.**

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 Neurology Resident will have the opportunity to interact on a daily basis with 3 board certified Radiologists to discuss radiographic procedures. Additionally, each resident spends 2 weeks (80 hours) on the radiology clinical rotation during their residency.

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 spend a 2-week rotation on the clinical pathology service during their residency (80 hours). They

will also be encouraged to discuss and review slides of cerebrospinal fluid cytology and biopsy results with the Clinical Pathologists and Residents on-clinics on a routine basis related to clinical cases.

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 College of Veterinary Medicine of the Ohio State University is fortunate to have a Neuropathologist on staff. Dr. Michael Oglesbee, Pathology Professor, coordinates monthly Neuropathology rounds (total of 36 hours over the course of a three-year residency) in which all members of the Neurology and Pathology section attend. In addition, the Resident will also attend the Neuropathology lectures (13 hours) in a Graduate Pathology course for Pathology Residents here at OSU, and can complement his/her training with review sessions such as those held at the ACVIM Forum or at the Neuroscience course.. Lastly, residents will spend two weeks (80 hours) on the pathology clinical rotation during their residency.

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 actively participate in neurosurgical procedures throughout the course of their residency. This participation will consist of observation, assistance and performance commensurate with the resident's progress during the residency program. Neurosurgical training will be provided mainly by the neurologists. Dr. Moore holds an ACVIM neurosurgery certificate, and Drs. da Costa and Cook have received extensive neurosurgical training as part of their residency training. At OSU, neurosurgical responsibilities are divided equally between orthopedics and neurology. Neurology residents receive neurosurgical emergencies on week days and are on-call for out of hours surgery (nights and weekend) one week out of the month, providing ample opportunity for 50 hours of neurosurgical experience.

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 fundamentals of electrodiagnostics will be taught in a Neurology graduate course offered once every three years here at OSU, taught by Drs. da Costa, Moore and Cook. Additional exposure will occur at the neurosciences course offered every two years. The residents will also be able to learn to perform and interpret the most common electrodiagnostic tests in our clinical cases on a daily basis- EMG, NCV, BAER, and EEG. Our practice has a Cadwell Sierra Wave with capability to perform basic electrodiagnostics, EEG, and motor evoked potentials (when used with an associated magstim device). One of our dermatologists, Dr. Lynette Cole has a keen interest in BAER and uses this test frequently to assess middle ear disease. Residents are also allowed time to observe and conduct BAER testing with Dr. Cole as opportunities to do so arise.

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:

Journal club is conducted once weekly providing a total of approximately 150 hours during a three-year residency.

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:

A formal resident evaluation form is completed every 6 months by the Advisor with additional input from other clinicians in the Service and in other specialties with whom the resident has interacted. This review is presented to the resident for discussion. Once finalized the evaluation is distributed to the resident, Department Chair, Service Head and the Chair of the Post-Professional Education Committee as a matter of record

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.

Completion of at least one research project is a requirement for the Masters degree which all residents must complete prior to receiving their residency certificate. There are a number of facilities both at the Veterinary College and at the College of Medicine that the Residents can use to conduct their Research. Bi-annual performance reviews and an advising committee are in place to ensure successful completion of the Master's project. Generally, by the end of the first year the resident is expected to have written a successful research proposal (generally funded by intramural grants), by the second year the resident has completed the project, and the third year is spent analysing data and writing and defending the thesis. Thesis defense generally occurs in early spring of the last year of the residency.

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; Digital radiographs; GE DRS 3.2
b) Ultrasonographic equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	on site; Acuson Sequoia 512
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; Various; managed by our hospital clinical pathology laboratory which is a commercial lab. CBC, chemistry analyzer, blood gas analyzer, cytology, parasitology, microbiology and endocrinology are all available on site
d) Electrocardiography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; Data scope Passport
e) Blood Pressure Measurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; Cardell 9402 and Ultrasonic Doppler 811-AL
f) Radiation Therapy Facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; Linear Accelerator; Seimans Mevatron MXE
g) Veterinary Library w/Literature Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; OSU college of Vet

		med library with online search capabilities.	
h) Computerized Medical Records w/Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; VetStar 7.0 and Filemaker Pro for computerized discharge summaries
i) Medical Library w/Literature Searching Capabilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; OSU college of Vet med library with online search capabilities.
j) Electromyography and nerve conduction velocity testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; Cadwell Sierra Wave
k) Evoked Response Equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; Cadwell Sierra Wave
l) Electroencephalography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; Cadwell Sierra Wave
m) Computed Tomography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site; GE LightSpeed Ultra 128 slice/sec
n) Magnetic Resonance Imaging (include field strength)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On site Acheiva, Phillips 3.0T

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:*

NA

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:

Clinicopathologic Conference (CPC) - case presentation/discussion by residents and faculty held on a weekly basis (1 hour per week).
 Journal/Book Club - discussion of articles/book chapters by residents and faculty (1 hour per week).
 Organ/disease oriented courses - didactic lectures presented by faculty for residents aimed at ACVIM examination prep (1-3 hours per week).
 Neuropathology rounds- held for one hour once monthly

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 are required to present a formal "grand rounds" style seminar twice yearly during CPC. They are also required to present their thesis work to the college in a formal seminar during the spring of their third year. Residents also assist in neurologic examination labs that are held each year for the first and third year vet students (8 hours total per year).

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: ACVIM during their second and third years, with additional meetings allowed if the resident is selected to present an abstract. Residents are also encourage but not required to attend brain camp

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

Yes	No	Number
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2-3

Comments: Results of research projects are expected to be published in the veterinary peer-reviewed literature. Additionally, the Residents will be encouraged to publish clinical reports during the course of their residency.

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

Please note that the detailed schedule provided is an example of a typical schedule. Each resident's schedule may differ slightly based on training needs and time commitments required for individual graduate research projects

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.