

Part One

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

Prior to making significant changes in a Residency Training Program, approval of the ACVIM and Neurology RTC must be obtained. The Candidate and/or Program Director must notify ACVIM, in writing before the changes are made to ensure that the proposed changes are approved. Significant changes could include, but are not limited to the following: changes in Program Director or advisors, transferring from one program to another, alterations in program duration, locations of secondary site training, switching to a 'dual board' program, or enrolling in an institutional graduate program.

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

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

Program Director Name :

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

Program Director Contact Information:

Work Phone:	<input type="text" value="(608) 265-3112"/>
E-mail:	<input type="text" value="helena.rylander@wisc.edu"/>
Mailing Address:	<input type="text" value="Dept. of Medical Sciences, SVM
2015 Linden Dr. West
Madison, WI 53706-1102"/>

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

Primary Site Location:	<input type="text" value="University of Wisconsin"/>	Length of Training Program:	<input type="text" value="3 year"/>
------------------------	--	-----------------------------	-------------------------------------

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

<input type="text" value="Heidi Barnes Heller
Helena Rylander
Cameron Starr"/>
--

3. Supervising Diplomates: Must be a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of the ECVN. The supervising diplomate must be active in the practice of the specialty and must maintain clinical competency in the field. **The sponsoring**

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

Starr Cameron - Neurology
 Heidi Barnes Heller - Neurology
 Helena Rylander - Neurology

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

Name and Specialty	Comments
Heidi Kellihan - Cardiology Sonja Tjostheim - Cardiology Rebecca Stepien - Cardiology Ruthanne Chun - Oncology Mackenzie Pellin - Oncology Michelle Turek - Oncology David Vail - Oncology Jonathan Bach - SAIM Harriet Bortnowski - SAIM Jessica Pritchard - SAIM Lauren Trepanier - SAIM Katrina Viviano - SAIM Michael Wood - SAIM	

5. Residents currently participating in your training program, along with the beginning date of the program, expected ending date of the program, and designated Resident Advisor.

Resident Name	Start date (mm/dd/yyyy)	End Date (mm/dd/yyyy)	Resident Advisor Name*
Casey Smith	7/15/17	7/14/20	Helena Ryland
Dylan Djani	7/15/19	7/14/22	



RESIDENCY TRAINING PROGRAM REGISTRATION
2019-2020
NEUROLOGY

Part Two

Part Two of the Neurology Residency Training renewal process addresses general features of the program that apply to all current residents. These questions will be used to provide the Residency Training Committee with information needed to judge the structure, quality, scope, and consistency of training provided.

Current Date:

Program Director Name:

Program Director Email Address:

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

Name of Sponsoring Institution (Primary Site):

1. Length of Training Program:

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

2. Advanced Degree:

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

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

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

Name of Diplomate(s)	Specialty Certifying Body	Comments
N/A		

4. Please list all **Diplomates** of the American College of Veterinary Pathology or the European College of Veterinary Pathologists in the areas of clinical pathology or gross/histopathology associated with residency training. If off-site, please explain the situation, and the method of providing direct contact with the resident.

Name of Diplomat(e)s	Specialty Certifying Body (ACVP or ECVP)	Clinical or Gross	Comments
Sophie Aschenbroich LaTasha Crawford Jennifer Dreyfus Gillian Shaw	ACVP ACVP ACVP ACVP	Gross Gross Gross Gross	
Marie Pinkerton	ACVP	Gross	
Leandro Teixeira	ACVP	Gross	
Kristen Friedrichs	ACVP	Clinical	
Allison Dusick	ACVP	Clinical	

5. Please list all **Diplomates** of the American College of Veterinary Radiology or the European College of Veterinary Diagnostic Imaging associated with residency training. If off-site, please explain the situation, and the arrangements for direct contact with the resident.

Name of Diplomat(e)s	Specialty Certifying Body (ACVR or ECVDI)	Comments
Lisa Forrest	ACVR	radiology and radiation oncology
Michelle Turek	ACVR	radiology and radiation oncology
Ken Waller	ACVR	radiology

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

Name of Diplomat(e)s	Specialty Certifying Body	Comments
Peter Muir Susan Schaefer Jason Bleedorn	ACVS	Orthopedic surgery
Jonathan McAnulty Robert Hardie Sara Colopy Susanna Sample	ACVS	Soft tissue surgery
Lesley Smith Rebecca Johnson Tatiana Ferreira	ACVAA	anesthesia and pain management
Paul Miller Ellison Bentley Gillian McLellan	ACVO	Ophthalmology
Douglas DeBoer Elizabeth Layne Harry Momont Jonathan Bach Julie Walker Corinne Lawson Katrina Viviano	ACVD ACVD Theriogenology ACVECC ACVECC ACVECC ACVCP	Dermatology Dermatology Emergency and critical care Emergency and critical care Emergency and critical care Pharmacology

--	--	--

The following questions will be used to provide the Residency Training Committee with information needed to judge the structure, quality, scope, and consistency of training provided.

NOTE: Direct supervision is required during clinical training, with the time required specified by each particular specialty. Direct supervision is defined as follows: The Supervising Diplomate and resident are participating in a clinical practice in which both the Diplomate and the resident are on duty and interactively and concurrently managing cases. The Diplomate need not personally examine each patient seen by the resident, but must remain physically available for consultation. Please use this definition when responding to the following questions regarding clinical rotations.

7. Is this a traditional or non-traditional residency training program? *A traditional neurology residency is a two (2) or three (3) year postgraduate training program, with a minimum of ninety six (96) weeks of supervised clinical training with a majority of the time spent at one location. A non-traditional neurology residency allows for training that may occur in non-contiguous blocks of time over an extended time period.*

Traditional	<input checked="" type="checkbox"/>
Non-traditional	<input type="checkbox"/>

For non-traditional programs, please provide a detailed description of the residency program, including length of program, proposed annual schedule, and the amount of time of direct Diplomate supervision for each location of the residency. The resident must complete the residency in blocks of time no less than four weeks in length and attend a minimum of 20 weeks of training per year. The training period may not exceed a total of five years.

N/A

8. The ACVIM Neurology Certification Manual (CM) requires that each resident experience 75 weeks (minimum) of clinical Neurology training under the supervision of either a Diplomate of ACVIM in the Specialty of Neurology or a Diplomate of ECVN. **The 75 weeks should include at least 50 weeks of direct supervision (see definition in CM) and the remainder as indirect supervision (indirect supervision is satisfied by the Supervising Diplomate Neurologist being available for face-to-face contact with the resident at least 4 days per week).**

Please provide an outline of planned yearly schedule, including number of weeks of direct and indirect supervision (i.e. in year 1, the resident will be directly supervised for 25 weeks etc.) A table similar to the example below outlining the proposed weekly schedule of duties for the residents should be provided:

EXAMPLE TABLE ONLY:

	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 *	35	34	36
Neurosurgery			
Neurology/Neurosurgery - Direct Supervision	35	34	32-35
Neurology/Neurosurgery - Indirect Supervision	0	0	1-4
Internal Medicine	4	2	0
Clinical Pathology	0	50 hrs	0
Radiology	0	0	1
Neuropathology	0	0	1
Other Rotation (please list the name of each rotation):			
Other: anesthesia (2), ophthalmology (1), cardiology (1), oncology (1)	4	1	0
Other: orthopedic surgery	1	0	1
Research	6	7	8
Independent Study	0	5	5
Vacation	2	2	2
Total **	52	52	52

* Many residencies are a combined neurology / neurosurgery program with no distinct separation between the services. Some programs, however, have separate training with a surgery service.

**The totals should add up to 52 weeks.

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

Clinical rounds daily with attending diplomate present all the time. Discussion around each case when it is presenting, and rounds in the evening about cases seen.

10. The neurology specialty requires that the resident spend at least 50 hours during the residency in the following rotations: Imaging, Clinical Pathology, Neuropathology, Electrodiagnostics and Neurosurgery as well as participate in emergency duties on a rotational

basis. A training hour (see CM 7.C.7) will be defined as a minimum of one (1) continuous hour of direct contact time with a supervising specialist in the other field. A Training Agreement Form must be completed and signed by the Diplomate supervising the required training, regardless of whether the training occurs on site or off-site. **Please use the standardized "Training Agreement Form" found on the ACVIM website (www.ACVIM.org) to document proof of supervision for all required contact hours (imaging, clinical pathology, neuropathology, electrodiagnostics and neurosurgery) in rotations other than neurology.** One Training Agreement form is required per rotation per resident at the beginning of the residency. Forms do not need to be resubmitted each year as long as a valid Training Agreement Form is on file.

In addition, please provide a brief description of how each phase of this required training is accomplished.

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

The findings on images (radiographs, CT, MRI) from each patient that is being treated by the neurology service will be discussed in person with the radiologist on duty. MRI rounds are being held 1 hour every other week, where residents present cases. This totals 26 hours/year. Neurology-Radiology-pathology rounds are held in 1 hour sessions 1-4 times per year and organized by the neurology residents. Radiographic and MRI findings are discussed in correlation with clinical findings, gross pathologic and histopathologic findings. The radiology, neurology and pathology faculty lead the rounds. Discussions are held about image alternative, imaging artefacts and imaging technique, gross pathology and correlation to clinical and image findings, histopathologic stains. The residents will also rotate one week through the radiology service, totaling 40-50 hours. In addition total didactic rounds for 3 years is: 87-90 hours

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

Rotation with a clinical pathologist is scheduled for 1 week and 2 days (56 hours) during the residency. Pathology(necropsy) rounds are held every day for 30 minutes and the neurology residents attend when there is a neurology patient submitted for necropsy.

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

Rounds with a human neuropathologist (Dr. Shariar Salamat) at the UW medical school is held one hour per month approximately 10 times per year in total. The resident is also sent to a neuropathology course or to spend 1 week with a neuropathologist at another institution (varies from year to year depending on availability and finances) during the 3 year residency, Neurology-Radiology-pathology rounds are held in 1 hour sessions 4 times per year and organized by the neurology residents. Radiographic and MRI findings are discussed in correlation with clinical findings, gross pathologic and histopathologic findings. The radiology, neurology and pathology faculty lead the rounds. Discussions are held about image alternative, imaging artefacts and imaging technique, gross pathology and correlation to clinical and image findings, histopathologic stains. Total didactic hours for rounds in 3 years is: 42 hours, plus the neuropathology course or 1 week at Michigan State University. The neuropathology course has been done by all residents so far and will be offered to all residents as long as a course is offered word wide, but is not mandatory.

Electrodiagnostics: 50 hours devoted to reviewing, evaluating, and interpreting different aspects of electrodiagnostics; including but not limited to, electroencephalography, electromyography, motor and sensory nerve conduction study and evoked potentials. Briefly state how the concepts of electrodiagnostics (including EEG) and their clinical application will be taught to residents during the training program. Specifically state whether or not the resident will have hands-on electrodiagnostic experience.

The service has an electrodiagnostic machine and performs electrodiagnostic work up including EMG, nerve conduction, somatosensory evoked potentials and BAER on a regular basis on clinical patients. EEG is available and done occasionally. Didactics and rounds is conducted to go over electrodiagnostics including EEG. A 1 week course is going to being organized every 2-3 year, so each resident participates in this course at least once 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/ECVN]. A Training Agreement Form must be completed if this training is provided by individuals other than the ACVIM (Neurology) or ECVN supervising Diplomate for the residency training program.

This is a medical and surgical program. All neurology faculty/supervisors are trained in surgery and supervise the residents in surgery. The residents initially assist in surgery to learn a new procedure, then do the surgeries under the supervision of the neurology diplomate, and eventually perform the entire surgeries on their own. The supervising neurology diplomate supervises those surgeries as well.

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

The residents participate in seeing emergency cases through the neurology service every day. These cases are both medical and surgical cases.

11. The neurology specialty requires that the resident spend a minimum of 80 hours involved in routine and regular participation in a critical review of the literature (e.g. journal club) during the residency training program with at least one board-certified neurologist in attendance at each journal club meeting. Please explain how this requirement is met:

One hour Journal clubs are held once a week in neurology and once a week in internal medicine. The resident alternates with the faculty to choose articles from journals and book chapters and the contents are critically reviewed. Total approximate journal club time in 3 years: 120 hours neurology 120 hours internal medicine.

12. The neurology specialty requires that the advisor meet with the resident at 6 month intervals to assess, review and critique the resident's progress and weekly schedule of activities. The advisor must provide written documentation of the review that will be signed by both advisor and resident. Please explain how this is accomplished:

Evaluations from all faculty that have worked with the resident are summarized and the advisor meets with the resident every 6 month to review evaluations and clinical performance. The mentors regularly meet with the resident to discuss and plan usage of the off clinic time. The evaluation is given both orally and in written form.

13. The neurology specialty requires that the resident must complete a basic science or clinical research project that follows the scientific method approach and receives approval by the resident advisor (review CM section 7.E.5.c). Please describe how you plan for the resident to undertake, monitor, and complete a project. Include a timeline that the resident and mentor will use as a guide for completion of the project. Note that publication of this research project is not a requirement.

One retrospective or prospective study or case series report presented as a poster, abstract or paper is required by the resident. This should be presented at the annual ACVIM, ECVN or ACVR meetings. This is a requirement for the resident to complete the 3 year residency program. The resident meets with the mentor after two months of starting the residency to discuss research projects. Depending on type of project, the research is presented the second or third year of the residency.

14. Please indicate the availability of the following facilities or equipment. Indicate if these are available at the primary training site, or at a different location. (In the Location column, indicate on-site for primary location or the name of the facility where the equipment is located if off-site.) For facilities that are not on-site, please describe the situation and availability in the space at the end of this section. Please also provide the manufacturer and model of the unit for electrodiagnostic and imaging equipment.

	Available?		Location of equipment?
	Yes	No	(On-site or list site name)
a) Standard radiological equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
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 checked="" type="checkbox"/>	<input type="checkbox"/>	On Site
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 checked="" type="checkbox"/>	<input type="checkbox"/>	On Site
j) Electromyography and nerve conduction study 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 checked="" type="checkbox"/>	<input type="checkbox"/>	On Site
m) Computed Tomography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On Site
n) Magnetic Resonance Imaging (include field strength)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	On Site

If any of the above equipment or facilities is available off-site, please explain how the resident can access them for case management, research, or study, *especially with respect to the use of imaging and electrodiagnostic equipment*:

N/A

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

All rounds described below are held approximately 10 months per year:

1. Neurology topic rounds are held twice a month. The literature for a specific topic is reviewed by the resident and the diplomates and discussed.
2. Medicine topic rounds are held weekly. These are extensive literature reviews on a disease or other topic scheduled by an ACVIM diplomate. Each ACVIM residents prepares 2-3 rounds per year and the faculty members prepare 1 lecture year.
3. Journal clubs are held once a week in neurology and once a week in internal medicine. The resident alternates with the faculty to choose articles from journals and book chapters and the content is critically reviewed
4. Case presentations with only resident and diplomates in neurology are held 1-2 times per month. The resident(s) present and reviews all aspects of clinical cases encountered in the clinic.
5. Neuropathology rounds with a human neuropathologist (Dr. Shariar Salamat) at the UW medical school is held one hour per month.
6. Radiology rounds are held 2 times (each 1 hour) per month with the radiology diplomates and the radiology residents. Cases are presented by the residents (radiology and neurology) and presentation completeness and interpretation of findings are discussed. The rounds are focused on interpreting MRI.
7. Neurology-radiology-pathology rounds are held 1-4 times per year. Clinical cases are discussed and clinical findings are compared to findings on imaging, gross pathology and histopathology. The residents prepare the cases for the rounds.
8. Gross pathology (necropsy) rounds are held 30 minutes per day and is attended as often as clinic schedule allows, but at least when neurology cases are presented.

16. The resident must give a presentation at a formal conference at least once per year. This may include lectures in departmental courses for veterinary students, grand rounds presentations, presentation of papers or seminars at conferences, or participation in continuing education programs. Documentation of these presentations must be included in the neurology credentials packet of the resident.

The resident is required to give an oral presentation or present a poster at one ACVIM, ECVN or ACVR meeting. The resident gives formal presentation in medicine topic rounds (see above) at a resident level to all other ACVIM residents, and at least one presentation to the veterinary students as part of their curriculum (neuroanatomy class, clinical pharmacology or other). Each resident also gives at least one grand round presentation during the 3 year residency.

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

In addition to the formal review rounds stated in Q 15 (topic rounds in medicine and in neurology, neuropathology rounds), the residents are encouraged to attend the ACVIM neuroscience course and the neuropathology course in Barcelona. Since there is limited funding to help the residents pay for these courses, they are not mandatory. They are also encouraged to attend the ACVIM Forum their second and third year of the residency.

18. How many major veterinary medical or medical meetings are each resident able to or expected to attend during his/her training program?

None	One	Two	> Two
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: ACVIM annual meeting the second and third year of the residency. The resident is also encouraged to attend a neuropathology course (Barcelona, Spain), and the biannual neuroscience course.

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

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

Comments: The research is a prospective or retrospective study. We require that the candidate presents the work as a poster or oral abstract presentation at the ACVIM meeting, or ECVN or ACVR and that the candidate writes a manuscript suitable for publication.

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

None

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

Significant changes could include, but are not limited to:

- transferring from one program to another
- alterations in program duration
- switching to a 'dual board' program
- enrolling in an institutional graduate program
- change of Program Director or Resident Advisor

I verify that the above information is an accurate reflection of this Residency Training Program.

Per the Certification Manual, each year, the Program Director (PD) must certify to the RTC/ RTCC and ACVIM, in writing, that they have read the ACVIM Certification Manual and understands their role in residency training.

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