

**ACVR Residency Training Program Application Form:**

<b>Cornell University</b>
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This document is to act as a guide for institutions desiring ACVR accreditation of their residency training program. It should be used in concert with the requirements set out in the ACVR Essentials of Residency Training document and it follows the headings of that document. It is intended to streamline the application process and help define what information the RSEC needs to evaluate the program. All terms used in this application have same definitions as defined in the Essentials.

**II. Objectives:**

Succinctly state the objectives of the training program.
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| <ul style="list-style-type: none"> <li>• <b>Provide a residency program that allows successful candidates to qualify for taking the ACVR board-certification examination.</b></li> <li>• <b>Provide specialty training in general radiology, fluoroscopy, ultrasonography, nuclear medicine, computed tomography, and magnetic resonance imaging in small and large animals.</b></li> <li>• <b>Provide specialty training in radioiodine treatment of hyperthyroidism in cats.</b></li> <li>• <b>Prepare candidates for academic or specialty practice.</b></li> </ul> |
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**III. Training period:**

What is the total length of the training program in months? <b>48</b>
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If this is a 4 year program, during what year will the resident be eligible to take the ACVR Preliminary Exam? If the resident is not eligible to take the exam during the beginning of the 3 <sup>rd</sup> year (September), please state the reason.
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<b>Beginning of the 3<sup>rd</sup> year (September)</b>
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What is the total duration of supervised clinical training in the program? <b>38.5 months</b>
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What are the responsibilities of the resident in the remaining non-clinical portion of the program?
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<b>25/38 weeks are prescribed:</b>
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| <ul style="list-style-type: none"> <li>• <b>External rotation in echocardiography (2 weeks total)</b></li> <li>• <b>Study for the qualifying examination (10 weeks total)</b></li> <li>• <b>Take the AVCR board-certification examination (2 weeks total)</b></li> <li>• <b>Attend the ACVR annual scientific meeting (1 week total)</b></li> <li>• <b>Job interviews (up to 2 weeks total)</b></li> <li>• <b>Vacation (8 weeks total)</b></li> </ul> |
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**13/38 weeks are for non-prescribed professional development such as additional board-examination preparation, teaching preparation, attending conferences, and completing research projects.**

#### IV. Direction and Supervision:

##### Program Director:

Who is the Director of Residency training? **Peter V. Scrivani, DVM, Dipl. ACVR**

What percentage of this individual's time is committed to clinical service and teaching of residents? **50%**

##### Faculty:

Please list the faculty member of the program accepting PRIMARY responsibility for training in each of the following core areas:

##### Roentgen diagnosis:

Faculty: **Peter V. Scrivani, DVM, Dipl. ACVR**

Percentage clinical service: **50%**

##### Diagnostic ultrasound:

Faculty: **Amy E. Yeager, DVM, Dipl. ACVR**

Percentage clinical service: **50%**

##### Computed Tomography

Faculty: **Peter V. Scrivani, DVM, Dipl. ACVR**

Percentage clinical service: **50%**

##### Magnetic Resonance Imaging:

Faculty: **Philippa Johnson, BVSc, CertVDI, Dipl. ECVDI, MSc**

Percentage clinical service: **50%**

##### Nuclear Medicine:

Faculty: **Philippa Johnson, BVSc, CertVDI, Dipl. ECVDI, MSc**

Percentage clinical service: **50%**

List the names and percentage clinical commitment of additional imaging faculty in the program, and their area(s) of instructional responsibility. For each imaging faculty in the program please provide a one page CV documenting their expertise in the area(s) of assigned responsibility.

For each of the specialty colleges listed below please list at least two Diplomates of these colleges who can be expected to regularly interact with radiology residents:

##### ACVIM

**John F. Randolph , DVM, Dipl. ACVIM**

**Thomas J. Divers, DVM, Dipl. ACVIM and ACVECC**

## ACVS

<b>James A. Flanders, DVM, Dipl. ACVS</b>
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<b>Norm G. Ducharme, DVM, MSc, Dipl. ACVS</b>
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## ACVP

<b>Sean P. McDonough, DVM, Dipl. ACVP</b>
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<b>Elizabeth Buckles, DVM, PhD, Dipl. ACVP</b>
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**V. Affiliation agreement:**

If all of the training will not be accomplished on-site, please attach a copy of the affiliations agreement(s). Include the scope of the training and amount of time the resident will be away from the home institution. **N/A**

**VI. Facilities:**

Briefly describe how the program meets the facility requirements.

- **Two multi-plate AGFA CR readers (small animal & large animal)**
- **Multiple wireless DR detectors**
- **Phillips RF special procedures room**
- **Flat-panel Ziehm C-arm for intra-operative imaging**
- **Toshiba Vantage Atlas 1.5 Tesla MR**
- **16-slice Toshiba Aquilion-LB CT**
- **MIE planar gamma camera system**
- **Isolation facilities for radioiodine therapy**
- **Phillips Epiq & IU22 ultrasound units with elastography capabilities**
- **The equipment is integrated via DICOM modality worklist through the medical record system, and images are archived and viewed with Carestream PACS, including both diagnostic and browser-independent web software.**
- **Integrated 3-D software is included.**
- **Multiple diagnostic workstations**

**VII. Clinical resources:**

Indicate the approximate number of patients seen annually by the home institution?
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<b>24,594 patients</b>
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What is the annual imaging caseload? <b>9,878 reports*</b>
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*\*We record the number of reports. Each report typically includes one examination—as defined in the Essentials document—but occasionally includes multiple examinations (eg, thorax and abdomen).*

Indicate the approximate breakdown of the patient population according to species.

Small animals (canine, feline)	<b>21,260 patients</b>
Large animals (equine and food animals)	<b>2550 patients</b>
Exotic animals	<b>784 patients</b>

What is the approximate annual imaging caseload of the program in:

Small Animal Radiology: <b>5000 reports</b>
Large Animal Radiology: <b>1150 reports</b>
Abdominal Ultrasound: <b>2500 reports</b>
Computed Tomography: <b>700 reports</b>
Nuclear Medicine: <b>175 reports</b>
Magnetic Resonance Imaging: <b>450 reports</b>
Other (specify): <b>Fluoroscopy, 25 reports</b>

#### VIII. Training content:

What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form? <b>75%</b>
If your answer is less than 75% please explain how reports are generated and how long it takes for the report to be available for review in typewritten form. <b>N/A</b>
Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident? <b>90%</b>
What percentage of resident reports are reviewed by the imaging faculty prior to finalization of the report? <b>90%</b>
When preliminary resident reports are reviewed and edited by the imaging faculty responsible for training, what percentage of the time are two or more faculty present? <b>The actual report is reviewed by one faculty member. Two or three faculty members typically attend morning rounds, at which time the residents present the previous day's cases prior to report writing.</b>

**As an additional way to provide feedback to residents we have used a computer program since 2009 that copies the resident's draft report and the faculty's verified report and displays the two reports side-by-side for direct comparison. Residents must review the two reports and "click a button" to acknowledge they have reviewed the changes for each report.**

**Please complete the table below**

	Approximate number of cases in the 30 months clinical experience
Small Animal Radiology:	<b>15650 reports</b>
Large Animal Radiology:	<b>4000 reports</b>
Abdominal Ultrasound:	<b>9000 reports</b>
Computed Tomography:	<b>2275 reports</b>
Nuclear Medicine:	<b>600 reports</b>
Magnetic Resonance Imaging:	<b>1375 reports</b>
Elective (any of above)	---
Required elective (specify):	---
<b>Total</b>	<b>32900 reports</b>

Please indicate the course number and unit assignment residents are required to take to meet the educational objectives for formal instruction as outlined in the Essentials in the following:

<b>Topic</b>	<b>Course number</b>	<b>Units</b>
Radiobiology:	<b>N/A</b>	<b>N/A</b>

The Physics of:

Diagnostic Radiology:	<b>N/A</b>	<b>N/A</b>
Nuclear Medicine:	<b>N/A</b>	<b>N/A</b>
Ultrasonography:	<b>N/A</b>	<b>N/A</b>

CT:	N/A	N/A
MRI:	N/A	N/A
<p>If your program does not offer formal courses in any or all of these topics please indicate how these educational objectives for each are met. Use attached sheets if necessary.</p> <p><b>These educational objectives are met through self-teaching or self-directed learning by the resident. Residents are expected to spend a great deal of time in libraries or on educational websites. Residents often form study groups (which may include residents from other services), ask questions of the faculty or attend conferences such as the Nuclear Medicine short course at the University of Tennessee. Additionally, faculty members often ask pertinent questions during rounds or on the clinic floor to emphasize or illustrate particular learning objectives. Residents and faculty use the ACVR's list of objectives as an organizational tool.</b></p>		

#### IX. Research Environment:

Over the last 5 years, what is the average number of peer reviewed publications, on which the IMAGING faculty listed under Direction and Supervision in <b>IV</b> above, are included as authors? <b>14</b>
What is the number of publications/submissions expected of a resident completing the program? <b>At least 1 publication/submission</b>
If this is an established program, what percentage of residents have made formal research presentations at the annual ACVR or equivalent national meeting? <b>70% (12/17)</b>
Is an advanced degree a requirement of the training program? <b>No</b>

#### X. Educational Environment:

How many lectures or scientific presentations are expected of each resident during the course of their training? <b>A minimum of 3</b>
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#### XI. Evaluation '*Evaluation of residents and protection mechanisms*':

<ul style="list-style-type: none"> <li>• At the 6 months reviews did your resident(s) successfully complete their residency training or did any of your resident(s) not adequately complete the last 6 months of training?</li> <li>• List the current members of the residents' review committee.</li> <li>• List the internal mechanisms in place to protect your resident if conflicts arise.</li> </ul> <p><b>The residents are reviewed semi-annually (in April and October) by Drs. Johnson, Scrivani, and Yeager. All current residents have successfully</b></p>
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**completed the most recent evaluation.**

**Please see attached document: "Grievance, Probation, Termination and Appeal Process for Interns and Residents"**

**XII. Teaching File:**

What is the nature and scope of the teaching file available to residents?

**We have a searchable electronic database called "PACS Teaching File." Individuals may search for imaging examinations by:**

- Patient demographics** (ie, age, sex, breed, species, complaint)
- Examination type** (ie, modality, body site, body system, date)
- Other search flags** (ie, etiology, keyword)

**When a search is performed, the user may click a button that will automatically open the images in our PACS. Currently we have over 9850 examinations cataloged.**

**This program replaced our previous electronic teaching file, "CUCVM Media Library," which is available but not maintained/updated.**

**We also can perform a "key word" search on reports to find additional examples of cases.**

How is it maintained/updated? **Faculty or residents daily identify and enter new cases, especially those cases that are discussed in rounds. Entries are updated when follow-up information becomes available.**

**XIII. Conferences:**

On average how many Known Case Conferences are conducted annually? **20**

**XIV. Literature resources:**

What is the geographic relationship between the nearest medical library and the training program? **The Flower-Sprecher Veterinary Library is in an attached building.**

**XV. Appendix:**

- (a) Provide the pass rate for first time, second time, etc for both the preliminary and certifying exams for your residents for the past 5 years. For example, for all residents finishing your program 5 years ago (Year 5), check the appropriate box. Complete the table for residents finishing 4 years ago (Year 4), 3 years ago (Year 3), etc.

	Year 5	Year 4	Year 3	Year 2	Year 1
Passed preliminary exam 1st time	1	1		1	2
Passed prelim exam 2 <sup>nd</sup> time					
Passed prelim after 2 <sup>nd</sup> time					
Passed certifying exam 1 <sup>st</sup> time				1	2
Passed certifying exam 2 <sup>nd</sup> time	1	1			
Passed certifying exam after 2 <sup>nd</sup> time					
Unsuccessful in all attempts		1			

- (b) Provide a clinical schedule for your resident(s). This schedule should provide a weekly or monthly outline of the resident's clinical responsibilities. This may be in the form of a master schedule or duty roster for your entire radiology section if desired.



## Schedule

*In summary, the first-year Resident (R1) is assigned only to XR (predominantly large animal), RAIT, and US. The remaining residents (R2, R3, and R4) rotate equally through all modalities. All residents rotate equally through emergency on-call: R3 and R4 residents might be scheduled to provide initial back-up support to R1 and R2 residents. A faculty radiologist is ALWAYS assigned to provide back-up support for the residents.*

### Off-Clinic Time:

- *R1 = 4 weeks (not during the first six months): 2 weeks vacation and 2 weeks professional development.*
- *R2 = 8 weeks: 2 weeks vacation, 2 weeks cardiology rotation, and 4 weeks professional development.*
- *R3 = 12 weeks: 2 weeks vacation, 6 weeks board preparation, 1 week to take the qualifying examination, and 3 weeks professional development.*
- *R4 = 14 weeks: 2 weeks vacation, 4 weeks board preparation, 1 week to take the qualifying or certifying examination, 1 week to attend the ACVR meeting, 2 weeks for job interviews, and 4 weeks professional development.*

*CAH = Companion Animal Hospital*

*EFAH = Equine & Farm Animal Hospital*

*RAIT = Radioiodine therapy*

### Weeks when All Residents on (~16 weeks per year):

		Week A	Week B
Morning	<b>CAH XR</b>	R2, R3	R1, R4
	<b>EFAH XR</b>	R2, R3	R1, R4
	<b>US</b>	R1, R4	R2, R3
	<b>NM</b>	R2, R3	R4
	<b>CT</b>	R2, R3	R4
	<b>MRI</b>	R2, R3	R4
	<b>RAIT—Treatment Plan</b>	R1	R1
	<b>Telemedicine</b>	R4	R3
	Afternoon	<b>CAH XR</b>	R1, R2, R4
<b>EFAH XR</b>		R1, R2, R4	R1, R2, R3
<b>US</b>		R3	R4
<b>NM</b>		R2, R4	R2, R3
<b>CT</b>		R2, R4	R2, R3
<b>MRI</b>		R2, R4	R2, R3
<b>RAIT—Discharge</b>		R1	R1
<b>Telemedicine</b>		R4	R3

**Weeks when 1<sup>st</sup> year resident off (~4 weeks per year):**

		<b>Week</b>
Morning	<b>CAH XR</b>	R3, R4
	<b>EFAH XR</b>	R3, R4
	<b>US</b>	R2
	<b>NM</b>	R3, R4
	<b>CT</b>	R3, R4
	<b>MRI</b>	R3, R4
	<b>RAIT—Treatment Plan</b>	R4
	<b>Telemedicine</b>	R4
Afternoon	<b>CAH XR</b>	R2, R4
	<b>EFAH XR</b>	R2, R4
	<b>US</b>	R3
	<b>NM</b>	R2, R4
	<b>CT</b>	R2, R4
	<b>MRI</b>	R2, R4
	<b>RAIT—Discharge</b>	R2
	<b>Telemedicine</b>	R4

**Weeks when 2<sup>nd</sup> year resident off (~8 weeks per year):**

		<b>Week A</b>	<b>Week B</b>
Morning	<b>CAH XR</b>	R3, R4	R1, R4
	<b>EFAH XR</b>	R3, R4	R1, R4
	<b>US</b>	R1	R3
	<b>NM</b>	R3, R4	R4
	<b>CT</b>	R3, R4	R4
	<b>MRI</b>	R3, R4	R4
	<b>RAIT—Treatment Plan</b>	R1	R1
	<b>Telemedicine</b>	R4	R4
Afternoon	<b>CAH XR</b>	R1, R4	R1, R3
	<b>EFAH XR</b>	R1, R4	R1, R3
	<b>US</b>	R3	R4
	<b>NM</b>	R4	R3
	<b>CT</b>	R4	R3
	<b>MRI</b>	R4	R3
	<b>RAIT—Discharge</b>	R1	R1
	<b>Telemedicine</b>	R4	R3

**Weeks when 3<sup>rd</sup> year resident off (~8 weeks per year):**

		<b>Week A</b>	<b>Week B</b>
Morning	<b>CAH XR</b>	R2, R4	R1, R4
	<b>EFAH XR</b>	R2, R4	R1, R4
	<b>US</b>	R1	R2
	<b>NM</b>	R2, R4	R4
	<b>CT</b>	R2, R4	R4
	<b>MRI</b>	R2, R4	R4
	<b>RAIT—Treatment Plan</b>	R1	R1
	<b>Telemedicine</b>	R4	R4
Afternoon	<b>CAH XR</b>	R1, R4	R1, R2
	<b>EFAH XR</b>	R1, R4	R1, R2
	<b>US</b>	R2	R4
	<b>NM</b>	R4	R2
	<b>CT</b>	R4	R2
	<b>MRI</b>	R4	R2
	<b>RAIT—Discharge</b>	R1	R1
	<b>Telemedicine</b>	R4	---

**Weeks when 4<sup>th</sup> year resident off (~10 weeks per year):**

		<b>Week A</b>	<b>Week B</b>
Morning	<b>CAH XR</b>	R2, R3	R1, R3
	<b>EFAH XR</b>	R2, R3	R1, R3
	<b>US</b>	R1	R2
	<b>NM</b>	R2, R3	R3
	<b>CT</b>	R2, R3	R3
	<b>MRI</b>	R2, R3	R3
	<b>RAIT—Treatment Plan</b>	R1	R1
	<b>Telemedicine</b>	R3	R3
Afternoon	<b>CAH XR</b>	R1, R2	R1, R2
	<b>EFAH XR</b>	R1, R2	R1, R2
	<b>US</b>	R3	R3
	<b>NM</b>	R2	R2
	<b>CT</b>	R2	R2
	<b>MRI</b>	R2	R2
	<b>RAIT—Discharge</b>	R1	R1
	<b>Telemedicine</b>	---	R3

**Weeks when 3<sup>rd</sup> and 4<sup>th</sup> year residents off (~4 weeks per year):**

		<b>Week</b>
Morning	<b>CAH XR</b>	R2
	<b>EFAH XR</b>	R2
	<b>US</b>	R1
	<b>NM</b>	R2
	<b>CT</b>	R2
	<b>MRI</b>	R2
	<b>RAIT—Treatment Plan</b>	R1
	<b>Telemedicine</b>	---
Afternoon	<b>CAH XR</b>	R1, R2
	<b>EFAH XR</b>	R1, R2
	<b>US</b>	Faculty
	<b>NM</b>	R2
	<b>CT</b>	R2
	<b>MRI</b>	R2
	<b>RAIT—Discharge</b>	R1
	<b>Telemedicine</b>	---