

## ACVR Residency Training Program Application

<b>Submission Date</b>	02-21-2018 13:44:35
<b>Institution Name:</b>	Colorado State University
<b>Email</b>	barrettdvm@gmail.com
<b>Succinctly state the objectives of the training program.</b>	The residency training program is designed to provide supervised training in diagnostic imaging in an atmosphere conducive to learning clinical diagnostic imaging with an introduction to clinical investigation. The residency is also designed to prepare the trainee for certification by the American College of Veterinary Radiology. The residency is designed to provide thorough training in small and large animal radiology and ultrasound. More limited training is also provided in nuclear scintigraphy, computed tomography, and magnetic resonance imaging.
<b>What is the total length of the training program?</b>	3 years
<b>What are the responsibilities of the resident in the remaining non-clinical portion of the program?</b>	Off clinic time is spent on clinical investigation projects, board exam preparation, conference attendance etc. Residents are allowed 10 days of vacation per year. Vacation time is considered in your off clinic time allotment.
<b>Who is the Director of Residency training?</b>	Myra Barrett
<b>What percentage of this individual's time is committed to clinical service and teaching of residents?</b>	50% of a 75% FTE appointment
<b>Roentgen diagnosis</b>	Linda Lang 80%
<b>Diagnostic ultrasound</b>	Angela Marolf 50%
<b>Computed Tomography</b>	Sean Adams 80%
<b>Magnetic Resonance Imaging</b>	Sean Adams 80%
<b>Nuclear Medicine</b>	Elissa Randall 50%
<b>List the names and percentage clinical commitment of additional imaging faculty in the program, and their area(s) of instructional responsibility.</b>	Kurt Selberg -- 50% clinical service -- large animal diagnostic imaging Lynn Griffin -- 50% clinical service all area of small animal diagnostic imaging Note: All faculty assume equal responsibility for training residents in all modalities. Myra Barrett and Kurt Selberg teach all large animal imaging modalities, the remainder of the faculty teach all small animal imaging modalities.
	<a href="#">CURRICULUM VITAE short nov 2017.docx</a>
<b>ACVIM</b>	Craig Webb

<b>ACVIM</b>	Gabrielle Landolt
<b>ACVS</b>	Deanna Worley
<b>ACVS</b>	Christopher Kawcak
<b>ACVP</b>	Tawfik Aboellail
<b>ACVP</b>	Gary Mason

### **Briefly describe how the program meets the facility requirements.**

The facilities at the CSU Veterinary Teaching Hospital reflect state-of-the-art diagnostic imaging. The diagnostic imaging department is completely filmless and digital with a web-based Radiology Information System (RIS) and PACS system (iSite Phillips). Diagnostic imaging has the following assigned rooms:

#### Radiology:

Large Animal 2 Examination rooms  
 Small Animal 3 Examinations rooms  
 Ultrasound 3 Examination rooms  
 CT 1 Examination room, 1 control room, and 2 equipment rooms  
 MRI 1 Examination room, 1 control room, 1 reading room and 1 equipment room  
 Nuclear Medicine 2 Rooms Diagnostic, 2 wards, 1 radiopharmaceutical lab  
 I-131 Facility 1 ward, 1 ante-room

Small Animal Room - Siemens Multix Unit 1-800-767-2313  
 800 mA 150 kVp Siemens Multix Top/Vertex Solitaire machine, with four way float top elevator table, Eklin RadipStart Clinical Digital Radiography System.

Small animal Radiography/fluoroscopy Room:  
 (more info in new Toshiba coming)  
 Eklin RadieStart Clinical Digital Radiography System.

Small Animal Special Procedure Room:Siemens 1-800-767-2313  
 Seimens Polydoros 805-80 KW generator  
 Camera mounted on a C (arcoscope arm) for fluoroscopy examinations and image intensification, and digital imaging X-ray tube mounted on a telescopic ceiling suspended crane for magnification studies  
 One pressure injector: Liebel-Flarsheim Angiomat 3000  
 Koordinate Kombi table with floating top  
 Fluoroscopy is incorporated with a (Infimed) Platinum One DSA digital system.  
 TIMS live video recorder and CD/DVD burner.

Large Animal Examination Room: Philips 1-800-722-9377  
 Two overhead ceiling-suspended longitudinal and transverse rail systems to support three telescoping cranes for high powered Philips X-ray tubes and a catapult bucky grid with interlocking capability at set distances and move as a unit or independently.  
 Eklin EDR3 Clinical Digital Radiography System with Cesium Iodide 17x17 active capture panel.  
 High powered ultra high heat capacity Philips X-ray tubes  
 Philips Super CP 100-100 kw generator  
 Dell Medical/Simon DR 400MA/125KVP system

In addition:  
 Two Minray 8015+port with Eklin Mark III Digital System

Ultrasound Room:  
 Toshiba Aplio 500 (x2)  
 GE Logiq 9

AGFA CR imaging plates for remaining rooms

Computer Tomography/PET  
 Philips PET/CT  
 Extended Brilliance workstation

Magnetic Resonance  
 GE 1.5 Tesla 9.0 LX MRI scanner with Multinuclear spectroscopy  
 Advantage Windows workstation

Nuclear Medicine:  
 Digital Omega Gamma Camera with Mirage Acquisition/Processing Station for large animal.  
 Dicom compliance  
 GE Millenium SPECT system for small animal planar, whole body and SPECT imaging

<b>Indicate the approximate number of patients seen annually by the home institution?</b>	40,487
<b>What is the annual imaging caseload?</b>	12,000
	Small Animals (canine, feline): 78% (31888) Large Animals (equine and food animals): 17% (6894) Exotic Animals: 4% (1645)
	Small Animal Radiology: 10400 Large Animal Radiology: 1500 Abdominal Ultrasound: 3800 Computed Tomography: 1100 Nuclear Medicine: 200 Magnetic Resonance Imaging: 570 Other (specify):
<b>Please check which of the following types of imaging cases the residents will have exposure to during the residency:</b>	Small Animal Echocardiography Large Animal Ultrasound Nonabdominal Small Animal Ultrasound (i.e. cervical, musculoskeletal) Food Animal Exotics Teleradiology/Referral Imaging
<b>What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form?</b>	85
<b>Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident?</b>	95
<b>What percentage of the resident reports are reviewed by the imaging faculty prior to finalization of the report?</b>	99
<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>	70

Small Animal Radiology: 5200  
 Large Animal Radiology: 750  
 Abdominal Ultrasound: 1900  
 Computed Tomography: 550  
 Nuclear Medicine: 100  
 Magnetic Resonance Imaging: 235  
 Elective (any of above): 120  
 Required elective (specify): Equine Ultrasound  
 Total: 8855

**Radiobiology** ERHS550 5

**Nuclear Medicine** ERHS701 4

**Ultrasonography** ERHS701 4

**CT** ERHS701 4

**MRI** ERHS701 4

**Over the last five years, what is the average number of peer reviewed publications, on which the IMAGING faculty listed under Direction and Supervision in IV, are included as authors?** 32

**What is the number of publications/submissions expected of a resident completing the program?** 1

**If this is an established program, what percentage of residents have made formal research presentations at the annual ACVR or equivalent national meeting?** 80%

**Is an advanced degree a requirement of the training program?** yes

**How many lectures or scientific presentations are expected of each resident during the course of their training?** 3

**Did all of your current resident(s) adequately complete the last six months of training?** Yes

**List the current members of the residents' review committee.**

All radiology faculty members participate in the review process of each individual resident.

S. Adams, DVM, Diplomate ACVR, M.S.  
L. Griffin, DVM, Diplomate ACVR (RO), M.S.  
L. Lang, DVM, Diplomate ACVR, M.S.  
A. Marolf, DVM, Diplomate ACVR  
E. Randall, DVM, Diplomate ACVR, M.S.  
M. Barrett, DVM, Diplomate ACVR, M.S.  
K. Selberg, DVM, Diplomate ACVR, M.S.

**List the internal mechanisms in place to protect your resident if conflicts arise.**

If progress towards completion of the Master's degree/Residency Program is deemed unsatisfactory by the Radiology faculty, a statement to this effect, including reasons for the unsatisfactory evaluation and suggested methods for correction of deficits will be provided to the resident, the resident's advisor, graduate committee, and to the Department Head. Deficiencies must be corrected within 3 months of the date of the statement of unsatisfactory progress. If deficiencies are not corrected, a recommendation to terminate the resident's program will be made.

If there are interpersonal conflicts, the residents resources include their major advisor, the residency director and the human resources department.

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

Radiology, ultrasound, CT, MR, and nuclear medicine cases are available for resident training. These teaching files are kept current and updated regularly with material from the known case conference rounds. These contributions are provided by the supervising faculty radiologists (who share KCC responsibilities equally) and by the residents who have rotating duties towards finding KCC cases.

There is also a file of articles compiled for reading that are selected to assist knowledge of the ACVR objective list. This is kept up to date by the residents who contribute articles to the file.

**How is it maintained/updated?**

The files are kept on a shared hard-drive and cloud-based drive and are regularly updated by residents and faculty.

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

25

**What is the geographic relationship between the nearest medical library and the training program?**

There is a medical library within the veterinary teaching hospital, where the program is conducted.

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): x number passed prelim 1st time, y number passed certifying exam 1st time, z number was unsuccessful.

	Year 5	Year 4	Year 3	Year 2	Year 1
Passed preliminary exam 1st time	1	2	1	2	3
Passed preliminary exam 2nd time					0
Passed preliminary exam after 2nd time		1			0
Passed certifying exam 1st time	2	1	2		2
Passed certifying exam 2nd time					1
Passed certifying exam after 2nd time					
Unsuccessful in all attempts					

[SCHEDULE SPRING 2018.doc](#)