

ACVR Residency Training Program Application Form:

Institution Name Texas A&M University
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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:

The goal of this three year program is to provide post graduate clinical training in veterinary radiology following a formal internship or equivalent experience. This program is designed to meet the requirements as established by the American College of Veterinary Radiology (ACVR), and successful progression through the program should qualify an individual to take the ACVR written board examination during the third year. No academic degree will be awarded. The training program begins on July 15. A maximum of one resident will be admitted every year.

III. Training period:

What is the total length of the training program in months? 36 months
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 rd year (September), please state the reason.
What is the total duration of supervised clinical training in the program? 30 months
What are the responsibilities of the resident in the remaining non-clinical portion of the program? Six months of the program are designated for research, teaching, studying and vacation

IV. Direction and Supervision:

Program Director:

Who is the Director of Residency training? Benjamin Young
What percentage of this individual's time is committed to clinical service and teaching of residents? 80%

Faculty:

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

Roentgen diagnosis:

Faculty: Ben Young
Percentage clinical service: 80%

Diagnostic ultrasound:

Faculty: Kathy Spaulding
Percentage clinical service: 80%

Computed Tomography

Faculty: Bunita Eichelberger
Percentage clinical service: 80%

Magnetic Resonance Imaging:

Faculty: Ben Young
Percentage clinical service: 80%

Nuclear Medicine:

Faculty: Bunita Eichelberger
Percentage clinical service: 80%

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

Drs. Matt Miller, Sonya Gordon, Ashley Saunders, Deb Zoran, Jorg Steiner, Mike Willard, John August, Claudia Barton, Jonathan Levine, Keith Chaffin, Noah Cohen, Allen Roussel, Kent Carter, Dave Schmitz, Kevin Washburn, Kathy Snyder

ACVS

Drs. Phil Hobson, Lisa Howe, Brian Saunders, Sharon Kerwin, Laura Peycke, Robin Dabareiner, Jeff Watkins, Peter Rakestraw, Neil Hooper, Tamara Swor

ACVP

Drs. Karen Russell, Brian Porter, John Edwards, Roy Pool, Mark Johnson

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.

VI. Facilities:

Briefly describe how the program meets the facility requirements. All radiographic suites in both the large and small animal clinics are equipped with Eklin Direct Digital Radiography units and PACS. In the small animal clinic, there are 2 standard radiographic rooms which are used for routine radiography. In addition, there is a special procedures room which houses a digital fluoroscope. There are two main ultrasound machine in the small animal clinic (Siemens Antares, Acuson Sequoia) which have color flow, PW and CW Doppler
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capabilities. In the large animal clinic, there are two ultrasound machines (Esaote Technos and a MyLab 30). Two additional portable units are also available (no Doppler). There is an in house, four-slice GE Lightspeed Computed Tomography unit which is used for small animal imaging.

In the large animal clinic, there are 2 rooms for standard imaging which currently employ the use both Eklin Direct Digital and an AGFA computed radiography system. Standard radiographic cassettes are also available if needed. In addition, a large animal special procedures room is available.

An on site nuclear medicine facility provides service for both large and small animal patients (Ultrascan IS2 large animal system with Mirage software).

We have an on-site MRI (Siemens Magnetom 1 Tesla) capable of scanning small animal patients. This unit, along with all other modalities, is connected to the PACS.

VII. Clinical resources:

Indicate the approximate number of patients seen annually by the home institution?
21,725

What is the annual imaging caseload? **9,957**

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

Small animals (canine, feline)	14,925
Large animals (equine and food animals)	6,070
Exotic animals	477

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

Small Animal Radiology:	4,689
Large Animal Radiology:	1,277
Abdominal Ultrasound:	1,788
Computed Tomography:	260
Nuclear Medicine:	80
Magnetic Resonance Imaging:	428
Other (specify): Equine Ultrasound:	703

VIII. Training content:

What percentage of imaging reports are typically available within 48 hours after the examination is conducted in typewritten or electronic form? **90%**

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.
Of the preliminary reports generated from the imaging caseload what percentage are initially produced by the resident? 50%
What percentage of resident reports are reviewed by the imaging faculty prior to finalization of the report? 100%
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? 75%

Please complete the table below

	Approximate number of cases in the 30 months clinical experience
Small Animal Radiology:	5,861
Large Animal Radiology:	1,596
Abdominal Ultrasound:	894
Computed Tomography:	130
Nuclear Medicine:	80
Magnetic Resonance Imaging:	80
Elective (any of above)	
Required elective (specify):	
Total	8,641

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:

Topic	Course number	Units
Radiobiology:	NUEN/BMEN 673	Resident will audit this course
The Physics of:		
Diagnostic Radiology:		

Nuclear Medicine:		
Ultrasonography:		
CT:		
MRI:		
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. See Appendix C		

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 IV above, are included as authors? Dr.s Young, Spaulding, and Eichelberger have produced 19 articles from 2004-2009
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? 100% (one resident has been through the program)
Is an advanced degree a requirement of the training program? No

X. Educational Environment:

How many lectures or scientific presentations are expected of each resident during the course of their training? Three Lectures
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XI. Evaluation:

During the program how often is resident performance evaluated in writing? The first evaluation is at 4 months, then every 6 months thereafter. This writing is both verbal and written and follows a format established by the Department of Large Animal Clinical Sciences.
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XII. Teaching File:

What is the nature and scope of the teaching file available to residents? A conventional teaching file pertaining to all aspects of diagnostic radiology is maintained. The cases are organized by subject (musculoskeletal, urinary, gastrointestinal, respiratory, cardiac, etc). In addition, an interesting case database is maintained by all the radiologists from the clinical caseload and is available online. With the addition of PACS, we will be creating a digital teaching file as well.
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How is it maintained/updated? **As interesting cases are identified, they are added to the online database for future review. In the future, interesting cases will be added to the digital teaching file.**

XIII. Conferences:

On average how many Known Case Conferences are conducted annually? **24**

XIV. Literature resources:

What is the geographic relationship between the nearest medical library and the training program? **The TAMU medical sciences library is located across the street and the Veterinary College is connected directly to it by an underground tunnel. The resident will have access to electronic delivery of journal articles through the Texas A&M University medical library system.**

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					100%
Passed prelim exam 2 nd time					
Passed prelim after 2 nd time					
Passed certifying exam 1 st time					
Passed certifying exam 2 nd time					
Passed certifying exam after 2 nd time					
Unsuccessful in all attempts					

- (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.

Resident's Schedule								
<u>Year</u>	<u>Week</u>	<u>Duty</u>	<u>Year</u>	<u>Week</u>	<u>Duty</u>	<u>Year</u>	<u>Week</u>	<u>Duty</u>
<u>1</u>	1	Tech SA	<u>2</u>	1	CT	<u>3</u>	1	Boards Prep
<u>1</u>	2	Tech LA	<u>2</u>	2	CT	<u>3</u>	2	Boards Prep

1	3	SA Rad	2	3	NM	3	3	Boards Prep
1	4	SA Rad	2	4	NM	3	4	Boards Prep
1	5	SA Rad	2	5	SA US	3	5	Boards Prep
1	6	SA Rad	2	6	SA US	3	6	Boards Prep
1	7	LA Rad	2	7	SA Rad	3	7	Boards Prep
1	8	LA Rad	2	8	SA Rad	3	8	BOARDS
1	9	SA Rad	2	9	SA Rad	3	9	Vacation
1	10	SA Rad	2	10	SA Rad	3	10	CT
1	11	SA Rad	2	11	LA Rad	3	11	CT
1	12	SA Rad	2	12	LA Rad	3	12	NM
1	13	SA US	2	13	SA Rad	3	13	MRI
1	14	SA US	2	14	SA Rad	3	14	SA US
1	15	SA US	2	15	SA Rad	3	15	SA US
1	16	SA US	2	16	SA Rad	3	16	SA Rad
1	17	SA Rad	2	17	SA US	3	17	SA Rad
1	18	SA Rad	2	18	SA US	3	18	SA Rad
1	19	LA Rad	2	19	SA US	3	19	SA Rad
1	20	LA Rad	2	20	LA Rad	3	20	LA Rad
1	21	LA Rad	2	21	CT	3	21	LA Rad
1	22	LA Rad	2	22	NM	3	22	SA Rad
1	23	LA Rad	2	23	Vacation	3	23	SA Rad
1	24	Vacation	2	24	Research	3	24	SA Rad
1	25	SA Rad	2	25	Research	3	25	SA Rad
1	26	SA Rad	2	26	Research	3	26	LA Rad
1	27	SA US	2	27	SA US	3	27	SA US
1	28	LA Rad	2	28	SA US	3	28	SA US
1	29	LA Rad	2	29	CT	3	29	LA Rad
1	30	SA Rad	2	30	NM	3	30	CT
1	31	SA Rad	2	31	Eq US	3	31	NM
1	32	SA Rad	2	32	Eq US	3	32	Eq US
1	33	SA Rad	2	33	LA Rad	3	33	Vacation
1	34	SA US	2	34	LA Rad	3	34	MRI
1	35	SA US	2	35	CT	3	35	SA US
1	36	SA US	2	36	SA Rad	3	36	MRI
1	37	SA US	2	37	SA Rad	3	37	NM
1	38	SA Rad	2	38	SA Rad	3	38	CT
1	39	SA Rad	2	39	SA Rad	3	39	SA Rad
1	40	LA Rad	2	40	CT	3	40	SA Rad
1	41	LA Rad	2	41	SA US	3	41	LA Rad
1	42	SA Rad	2	42	Vacation	3	42	SA US
1	43	SA Rad	2	43	SA Rad	3	43	Research
1	44	SA US	2	44	SA Rad	3	44	SA US
1	45	LA Rad	2	45	SA US	3	45	SA US
1	46	LA Rad	2	46	LA Rad	3	46	CT
1	47	SA Rad	2	47	LA Rad	3	47	MRI
1	48	SA Rad	2	48	SA Rad	3	48	SA Rad
1	49	SA Rad	2	49	SA Rad	3	49	SA Rad
1	50	SA Rad	2	50	CT	3	50	CT
1	51	Vacation	2	51	LA Rad	3	51	MRI
1	52	LA Rad	2	52	Boards	3	52	Boards Prep

Prep

Appendix C.

The resident will participate in mandatory daily radiology rounds to review radiology reports. The resident will have the opportunity to participate in weekly medicine and pathology rounds. No formal didactic training will be required. Instead, the resident will have assigned topics of focused learning during the training program. A radiologist will be assigned to supervise and guide the residents study on each topic (via informal lectures, reading lists, etc). At the end of each section, a comprehensive written exam will be administered. A typical schedule follows:

First Year of Residency

Jul	Aug	Sept	Oct	Nov	Dec
				Anatomy	
Jan	Feb	Mar	Apr	May	Jun
		Physics			

Second Year of Residency

Jul	Aug	Sept	Oct	Nov	Dec
Physiology/ Pathophys.				Special Procedures	
Jan	Feb	Mar	Apr	May	Jun
			Alternate Imaging		

Third Year of Residency

Jul	Aug	Sept	Oct	Nov	Dec
Radiation Biology	Boards Study	Boards Study			
Jan	Feb	Mar	Apr	May	Jun
					Boards Study

Topic	Radiologist
Anatomy	Young
Physics	Young
Physiology	Spaulding
Special Procedures	Eichelberger
Alternate Imaging	Young
Radiation Biology	Eichelberger

**BENJAMIN D. YOUNG, DVM, MS
DIPLOMATE ACVR**

Present Position and Address

Title: Clinical Assistant Professor

Office:

Department of Large Animal Medicine & Surgery
College of Veterinary Medicine
Texas A&M University
College Station, TX 77843-4475

Education:

Degree/Training	Conferring Institution	Field	Year
BS	Colorado State University	Biology	1996
DVM	Colorado State University	Veterinary Medicine	2000
MS	The Ohio State University	Radiology	2006

Specialty Training and Certification

Residency	The Ohio State University	Radiology	2003-2006
Diplomate	American College of Veterinary Radiology		2006

References:

- **Young BD**, Samii VF, Mattoon JS, Weisbrode SE, Bertone AL. Subchondral bone density and cartilage degeneration patterns in osteoarthritic metacarpal condyles of horses. *Am J Vet Res* 2007;68:841-849.
- Hettlich BF, Fosgate GT, Levine JM, **Young BD**, Kerwin SC, Walker MA, Griffin JF, Maierl J. Accuracy of conventional radiography and computed tomography in predicting implant position in relation to the vertebral canal in dogs. (In Revision, *Vet Surg*, Oct 2009)
- Cooper JJ, Levine JM, **Young BD**, Hicks DG, Hoffman A, Bratton GR. Imaging diagnosis: MRI pseudolesion associated with the petrous temporal bone. *Vet Radiol Ultrasound* 2009;51:39-41.
- **Young BD**, Levine JM, Fosgate GT, de Lahunta A, Flegel T, Matiasek K, Miller A, Silver G, Sharp N, Greer K, Schatzberg SJ. Magnetic Resonance Imaging Characteristics of Necrotizing Meningoencephalitis in Pug Dogs *J Vet Intern Med* 2009;23:527-535
- Schatzberg SJ, Li Q, Porter BF, Claiborne MK, Levine JM, Levine GJ, Israel SK, **Young BD**, Kiupel M, Greene C, Ruone S, Anderson L, Tong S. Broadly Reactive Pan-Paramyxovirus RT PCR for the Detection of Canine Distemper Virus in a Case of Canine Meningoencephalitis of Unknown Etiology. (In Press, *J Vet Diag Invest*, Jun 2009)
- JF Griffin IV, **BD Young**, GT Fosgate, MA Walker, JP Watkins. Focal skeletal muscle uptake of ^{99m}Tc-HDP caused by peroneal nerve blocks in horses. (In Press, *Vet Radiol Ultrasound*, Oct 2009).

Curriculum Vitae

Name: Kathy A. Spaulding **Rank And Title:** Professor

First Appointment TAMU: Date: 11/01/06

Department: LA clinical Sciences college of Vet med & Biomedical Sciences

Education:

Institution & Location	Major Field	Degree	Year
Purdue Univ., W. Lafayette, In			1969 - 1972
Purdue Univ., W. Lafayette, In	Veterinary Medicine	D.V.M.	1972 - 1976
University of Tennessee	Residency Radiology	ACVR Boarded	1980- 1983

Professional Experience:

Institution And Location	Position Title	Inclusive Dates
Central Kentucky Vet. Clinic Georgetown, KY	Assoc. Staff Vet.	03/76-02/77
Richmond Rd. Plaza Vet. Clinic Lexington, KY	Assoc. Staff Vet.	02/77-11/78
Allandale Animal Hospital Kingsport, Tenn.	Assoc. Staff Vet.	01/79-07/80
College Of Veterinary Med. Univ. Of Tenn., Knoxville, TN	Radiology Resident	09/80-06/83
College Of Veterinary Medicine Michigan State University	Asst. Prof. Radiol.	07/83-06/85
NCSU, Dept. Of APR	Asst. Prof. Radiol.	07/85-07/91
NCSU, Dept. Of APR	Assoc. Prof. Radiol.	07/91-07/ 04
NCSU, Dept. Of MBS	Clinical Professor Radiol.	07/04- 10/31/06
TAMU, Dept. of LA Clinical Sciences	Clinical Professor Radiol	11/01/06- present

Publications 2002- 2006:

- Berry CR, DeGrado TR, Nutter F, Garg PK Breitschwerdt, EB, **Spaulding KA**, Concannon KD, Zalutsky MR, Coleman RE. Imaging of Pheochromocytoma in 2 dogs using p-{18F} Fluorobenzylguanidine. *Vet Radiol & Ultrasound* 2002 43(2);183-186.
- Davis JL, Gilger BC, **Spaulding K**, Robertson ID, Jones SL. Nasal adenocarcinoma with diffuse metastases involving the orbit, cerebrum, and multiple cranial nerves in a horse. *J Am Vet Med Assoc.* 2002 Nov 15;221(10):1460-3, 1420.
- Savary-Bataille K, Bunch SE, **Spaulding KA**, Jackson MW, Law JM, Stebbins ME. Percutaneous Ultrasound-Guided Cholecystocentesis in Healthy Cats. *J Vet Int Med* 2003;17(3):298-303.
- Pintar J, Breitschwerdt E B, Hardie EM, **Spaulding KA**. Acute Non-Traumatic Hemoabdomen In The Dog: A retrospective analysis of 39 cases (1987 – 2001). Accepted December 2002 –in press *J Am Anim Hosp Assoc A*.
- Douglass, JP, Berry CR, Thrall DE, Malarkey DE, **Spaulding KA**. Radiographic Features of Aortic Bulb/Valve Mineralization in 20 Dogs. *Vet Radiol & Ultrasound.* 2003; 44(1'):20-27.
- Saito, S, Olby NJ, **Spaulding KA**, Munana K, Sharpe N. The Relationship Between Basilar Artery Resistive Index, Degree of Ventriculomegaly and Clinical Signs in Hydrocephalic Dogs. Accepted- in press *Vet Radiol&Ultrasound*.

Bunita Eichelberger DVM, MS, Dipl. ACVR

EDUCATION

Masters of Science, Radiological Health Sciences

Colorado State University, Fort Collins 2008

Doctor of Veterinary Medicine, Veterinary Medicine

University of California, Davis 2004

Bachelor of Arts in Biology with minor in Chemistry

California State University, Sacramento 1997

PROFESSIONAL EXPERIENCE AND ACADEMIC APPOINTMENTS

2009- **Clinical Assistant Professor**-Texas A&M University

2008- **Staff Veterinarian**-Massachusetts Veterinary Referral Hospital

2009

2005- **Residency**-Colorado State University Veterinary Teaching Hospital

2008

2004 **Internship**-Peterson and Smith Equine Hospital, Ocala, Florida

CLINICAL SPECIALTY/BOARD CERTIFICATION

2009 Diplomate, American College of Veterinary Radiologist

AWARDS AND HONORS

Phi Kappa Phi Honor Society, Colorado State University-2006

Phi Zeta Honor Society, University of California, Davis-2003

BIBLIOGRAPHY

Pierre-Yves Mulon, Philippa Sprake, Jennifer Gold, Bunita Eichelberger. What is your diagnosis? Choanal Atresia in a cria. Manuscript submitted for publication.

Laura H Hoyt, Marc J Greenberg, Catriona M MacPhail, Bunita Eichelberger, Angela Marolf, Susan Kraft. Imaging Diagnosis – Magnetic Resonance Imaging of an Organizing Abscess Secondary to a Retrobulbar Grass Awn. Veterinary Radiology and Ultrasound. November/December 2009; Volume 50(6):646-648.

Campbell, Jennifer and Bunita Eichelberger. Clinical Snapshot. Compendium: Continuing Education for Veterinarians. November 2006; Volume28(11): 756-758.

PRESENTATIONS

Eichelberger, Bunita. Chronic nasal disease in dogs and cats. Local continuing education seminar to general practitioners.

Eichelberger, Bunita, et al. Does Dynamic Contrast Enhanced MRI Predict Percent Tumor Necrosis in Spontaneous Canine Osteosarcomas?

Oral presentation at ACVR annual meeting, November 2007