

Updated March 2021

**Anesthesiology Residency Training Program School
of Veterinary Medicine
University of Wisconsin-Madison**



**SCHOOL OF
VETERINARY MEDICINE**
University of Wisconsin-Madison

Advancing animal and human health with science and compassion

The University

The University of Wisconsin – Madison is ranked 7th among the nation’s best public universities and is in the top 10 for research dollars amongst all universities in the USA. There are ~ 50,000 students, 45 libraries containing 5.9 million volumes and the campus is set on 933 beautiful lakefront acres in the center of the city, adjacent to a 1262 acre arboretum. The UW Medical School, a short walk from the veterinary campus, is ranked in the top 2 percent of the nation’s major medical centers in 10 medical specialties. The veterinary school is located within view of Lake Mendota, the largest of Madison’s lakes and adjacent to many walking and jogging paths along the lake front.



The City

Madison is also home to the seat of state government, providing an eclectic, energized atmosphere. Madison offers both small town charm and a range of cultural and recreational opportunities usually found in much larger cities. And, with four lakes and over 200 parks, it is one of the nation's most scenic cities. Vilas Zoo, near downtown Madison, is one of the few free zoos in the nation. Madison consistently ranks as one of

the top places in the country to live, work, go to school and play.

Built on an isthmus in the midst of four glacial lakes, Madison offers an abundance of activities including sailing, fishing, swimming at thirteen area beaches, boating, dozens of public tennis courts, hiking, biking, (one of the best cities in which to bike in the country), ice skating, jogging and golfing. Hunting, snowmobiling, skiing, sledding and canoeing are also popular in nearby areas.

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**Anesthesia and Pain Management Residency
Training Program School of Veterinary Medicine
University of Wisconsin-Madison**

Introduction

a. Objectives

The objectives of this training program are to prepare the resident for successful completion of the ACVAA board examination and subsequent academic appointment, private specialty practice, industry or zoological work depending on the resident's interest. Training is provided in small, large and exotic animal species and in research and publication.

b. General nature of the residency program

The University of Wisconsin-Madison, School of Veterinary Medicine offers a 3-year clinical residency training program in veterinary anesthesiology and pain management. There are 5 faculty and 2 instructors to support the program. Based on the ACVAA requirements of minimal number of core species that are personally, directly managed by the resident (minimum = 300), ~27 months of supervised clinical training in the 36 months' residency are expected, with the remaining ~9 months being devoted to research, rotations within other specialties, and vacation. Supervised clinical training includes approximately 13 months in Large Animal Anesthesiology and 14 months in Small Animal and Exotic Animal Anesthesiology. Residents will rotate on a day-to-day basis between small, large, and exotic animal sections depending on caseload. All of the above training is completed in the 36 months of the residency and can be accomplished on site. The resident will be eligible to submit their credentials for ACVAA board examination by September of their 3rd year, provided that an original research manuscript has been submitted to a peer-reviewed journal, and that is accepted for publication within 2 months (60 days) prior to the board examination.

Two weeks (10 days) of vacation and sick leave are granted annually. Vacation time should be taken during off clinic weeks. The program does not include an advanced degree.

c. length of the residency: 3 years.

d. start date of the residency: on or about July 15

e. size of the residency class: 2-3 residents at a time.

I. Application & Selection

- a. As of 2021, resident selection is through the Veterinary Intern/Resident Matching Program sponsored by the AAVC. For forms email virmp.org. *Note: as of 2021 the University of Wisconsin will not consider citizens outside of the USA or Canada.*
- b. A rotating internship (i.e. not an anesthesia internship) or, minimally, one year of equivalent clinical experience is required prior to entering the residency. Resident selection is based on interviews, professional experience, letter of intent, professional goals, and recommendations.
- c. Applicants must submit application form, college transcripts (including GPA and class rank) and 3 letters of recommendation.
- d. Applications should be sent to the Chair, Department of Surgical Sciences, School of Veterinary Medicine, University of Wisconsin, 2015 Linden Dr., Madison, WI 53706. The University of Wisconsin-Madison is an equal opportunity employer. Applicants must return a completed Applicant Agreement form and a rank order list, along with application fee to VIRMP, 37 W. Broad St., Suite 480, Columbus, OH 43215.
- e. Application deadline to the matching service is on or about December 1.

II. Objectives: University of Wisconsin Anesthesiology Residency Program

The objectives of this training program are to prepare the resident for successfully passing the ACVAA board examination and subsequent academic appointment, private specialty practice, or industry or zoological medicine depending on the individual's interests.

Training is provided in small, large and exotic animal species and in research and publication.

III. Training period:

The total length of the training period is 36 months. By September of the 3rd year of residency, the resident can submit credentials for ACVAA board examination, provided that a submitted and, eventually, accepted research manuscript is included in the credentials. If accepted for credentials, the resident will be able to sit the ACVAA examination (usually held in early summer) by late in the 3rd year of their residency.

The total duration of supervised clinical training in the program is 27 months, or approximately 3 weeks out of each month of the 36-month residency. Residents are scheduled for 1 off-clinic week/month for research, study time, or rotations within other clinical specialties or at the UW School of Medicine and Public Health Department of Anesthesiology. If the resident desires to spend longer than 1 week in an off-site rotation or for research studies, that can be arranged within the context of total off clinic time.

The responsibilities of the resident in the non-clinical portion of the program (9 months over 36 total months) are study, research, manuscript preparation, other clinical specialty rotations, board preparation, and vacation.

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IV. Direction and Supervision: Program

Director:

Lesley J. Smith DVM, DACVAA
Clinical Professor of
Anesthesiology



Dr. Smith grew up in Clinton, New Jersey by way of England and received her AB from Vassar College in 1985. She graduated with a DVM from Washington State University in 1989, where she also completed her residency in Anesthesiology in 1992. After short instructorships at the University of Georgia and Cornell, she joined the faculty at the University of Wisconsin in 1997. She was promoted to full Professor in 2009. Her specific research interests are novel approaches for extending analgesia and total intravenous anesthesia. Clinically, she enjoys large animal anesthesia and complicated small animal cases. Dr. Smith serves as the residency coordinator for the section of Anesthesia and Pain Management.

Faculty: Rebecca Johnson DVM, MS, PhD, DACVAA Clinical Professor of Anesthesiology



Dr. Johnson obtained her DVM degree from the Ohio State University in 1993, completed a residency and MS degree at the University of Wisconsin, and became board-certified in Veterinary Anesthesiology and Pain Management in 1997. In 2002, she completed a PhD in Respiratory Neurophysiology. She currently is the Research Anesthesiologist and Clinical Professor of Anesthesia and Pain Management at the University of Wisconsin's School of Veterinary Medicine. Her interests include: 1) advances in anesthetic and analgesic techniques of laboratory animal species, and 2) the effects of opioid and non-opioid analgesics on the gastrointestinal and respiratory systems of companion animals.

Tatiana Ferreira DVM, MS, PhD, DACVAA



Dr. Ferreira earned her veterinary medical degree from the Fluminense Federal University – UFF at Rio de Janeiro, Brazil in 2005. She obtained a master’s (2008) and doctoral degrees (2010) in veterinary anesthesia at São Paulo State University - UNESP, also in Brazil. She then completed an anesthesia residency at the University of California - Davis in 2013 and became board certified by the American College of Veterinary Anesthesia and Analgesia (ACVAA) in 2014. In that same year, she joined the University of Wisconsin – Madison (UW – Madison) School of Veterinary Medicine as an anesthesia clinical instructor. In 2016 she started on her current position as a Clinical Assistant Professor in Anesthesia and Pain Management at UW - Madison. Dr. Ferreira’s clinical and research interests include balanced anesthesia and pain management of small, large, and exotic animals with special focus on regional anesthesia techniques.

Carrie Schroeder, DVM, DACVAA
Clinical Assistant Professor of
Anesthesiology



Section Head,
Anesthesia and Pain
Management

Dr. Schroeder grew up in the Milwaukee, WI area and received her BS and DVM from the University of Wisconsin, graduating veterinary school in 2006. She returned to the University of Wisconsin in 2008 for residency and never left. Her research and clinical interests are in the comparative anesthesia of nondomestic species and regional anesthesia. She currently serves as the chair of the American College of Veterinary Anesthesia and Analgesia credentials committee.

Adrianna Sage DVM, MS, DACVAA
Clinical Assistant Professor of
Anesthesiology



Dr. Sage grew up in Ontario, Canada and graduated from the Ontario Veterinary College at the University of Guelph in 2008. After completing a small animal rotating internship at VCA Southpaws Veterinary Specialists & Emergency Center in Fairfax, VA, she returned to Ontario where she worked as a small animal general practitioner and emergency veterinarian for 7 years. During that time, she developed an interest in anesthesia and pain management and focused on advancing her knowledge and skills in those areas. In 2019 Dr. Sage completed a residency in Anesthesia and Pain Management along with a Master of Science degree at the University of Illinois. She became a diplomate of the American College of Veterinary Anesthesia and Analgesia that same year and worked as a locum anesthesiologist prior to joining the faculty at the University of Wisconsin-Madison in August 2020. Dr. Sage's research interests include enhancing recovery quality and outcomes, partial and total intravenous anesthesia, thermoregulation, and locoregional anesthetic techniques.

Lindsey Culp-Snyder DVM, MS, DACVAA
Clinical Instructor in Anesthesiology



Dr. Snyder coordinates the Fundamentals of Anesthesiology I and II courses and the Surgical Exercises Laboratory. She is certified as a CVA.

Kyle Bartholomew DVM



Dr. Bartholomew grew up in Wisconsin and graduated with his DVM from the University of Wisconsin – Madison in 2017. He then completed both his rotating internship and a residency in Anesthesia and Pain Management at the University of Wisconsin. In 2021, after the completion of his residency, he continued at the school as a clinical instructor. During his time as a resident, Dr. Bartholomew was awarded the Instructor of the Year award by the class of 2020. He was also nominated for the American Association of Veterinary Clinicians Resident award. He has published several studies and case reports during his time as a resident.

Information on each faculty's area of research interest and teaching responsibilities can be found at www.vetmed.wisc.edu in the Department of Surgical Sciences

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V. Facilities:

The section of Anesthesia and Pain Management has a large 6 station Small Animal Induction room, with adjacent workspace including 3 computers with on-line access. There are 6 OR's each equipped with state-of-the-art anesthetic machines and monitoring equipment. Each monitoring station has the capability to perform ECG, pulse oximetry, 2 direct blood pressure ports, capnography, temperature, respiratory gases. In addition, all OR's have anesthetic machines that can perform mechanical ventilation, either in pressure or volume mode, and several machines can display pressure-volume loops. All machines are equipped with either isoflurane or sevoflurane vaporizers. The section owns multiple fluid pumps, syringe pumps, forced air warmers, portable monitors, nerve stimulators, and 2 ultrasound machines for loco-regional anesthesia. The section also has a Large Animal Induction room with squeeze gate and adjacent work/prep room. Monitoring and equipment for large animals is essentially the same as what is described above for small animal, but includes 3 large animal anesthetic machines, each with an isoflurane and sevoflurane vaporizer and ventilators.

The section provides anesthesia to the hospital for diagnostic imaging (CT, MRI, fluoroscopy, ultrasound, routine radiographs), as well as for exotic animals, outpatients, and patients that present for our state-of-the-art tomotherapy services. The UW Veterinary Care clinic operates as a 24/7 ER and the anesthesia service provides after-hours and weekend anesthesia for those patients. We are closely affiliated with the Vilas Zoo and the anesthesia service participates in all zoo animal immobilizations or surgical procedures on site at the zoo.

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VI. Clinical resources:

The UW Veterinary Care hospital sees approximately 23,000 patients annually.

By species, the Anesthesiology and Pain Management Section anesthetizes on an annual basis approximately:

Companion Small Animals:	6000
Equine:	1000
Bovine:	125
Camelid:	25
Exotic and Zoo:	500

The UWVC hospital has 6 small animal OR's and an 8-cage recovery room, 2 large animal OR's and 2 recovery stalls, a CCU with full-time coverage by 5 boarded criticalists, a CT, MRI, and tomotherapy units. In addition, there are facilities in the large animal barn for housing large bulls and anesthetizing them in the bull pens. The Special Species service involves our section in anesthesia of inpatient and outpatient exotic animals, and does the veterinary work for the Madison Vilas Zoo, and, occasionally, the Milwaukee Zoo. Residents and faculty from our section provide anesthesia services of larger exotic animals routinely at the Vilas Zoo. The section of Anesthesia and Pain

Management has a close affiliation with the Anesthesiology department at the UW School of Medicine and Public Health and our residents are welcome to rotate at the human hospital. Moreover, the MD anesthesia residents routinely spend a week's rotation with our section of Anesthesia and Pain Management.

VII. Clinical Training Content:

Residents are scheduled for clinic duty approximately 3 out of every 4 weeks. During that time, they are responsible for directly managing small and large animal patients on an equal basis. In the 1st year of training, residents are directly supervised by faculty in case management. By the beginning of the 2nd year, residents are allowed a more supervisory role and are responsible for oversight of cases managed by students or technicians on a more regular basis, although still with faculty supervision. In the 3rd year, residents may be primarily responsible for the caseload in either small animal or large animal anesthesia, but this will depend on caseload and resident preparation, and will continue to be conducted with faculty input and presence.

Residents are responsible for primary on-call duty for emergency after hour's cases. On call duty is 25%. This duty is equally shared amongst the residents and technicians and includes responsibility for late cases. All after hour's duty will be assigned with faculty backup available. Residents are expected to live within a 20 minute drive of the hospital.

In addition to clinical case management, residents should actively participate in weekly book chapter review with the Anesthesiology faculty.

Suggested texts can be found at www.ACVA.org. Residents are expected to participate in weekly Anesthesiology journal club. Residents are welcome to participate in Critical Care journal club. Learning opportunities at the UW Medical School Anesthesiology Service are supported.

As part of residency training, Anesthesiology residents will be asked to participate in teaching laboratories for undergraduate veterinary students as well as rounds presentations for 4th year students or residents from other sections. This should be a relatively small proportion of total resident responsibility and will be assigned with ample faculty mentoring.

Residents are encouraged to attend at least one CE meeting annually. Suggested meetings are the ACVAA, NAVAS, ASA, ECVAA, or IVECCS meeting. Others can be chosen with faculty consent.

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VIII. Research Environment and Training:

The Anesthesiology faculty has a strong track record in research involving pain management in companion animals, ultrasound/nerve stimulator guided nerve blocks, recovery optimization, and in respiratory physiology. For specific publications, one should refer to www.vetmed.wisc.edu.

Early in the 1st year of residency, the resident will discuss with the Anesthesiology

faculty what interests they have from a clinical or basic science research standpoint that could lead to a viable project and an accepted manuscript. A faculty mentor will assist with project selection, grant writing if applicable, and data collection. Data analysis and manuscript preparation will be mentored by faculty. It is expected that the 1st year of the residency will largely involve discussion of project ideas, funding, animal care and use forms, and case recruitment if applicable. Late in the 1st year and part of the 2nd year will be devoted to data collection and analysis, with manuscript preparation late in the 2nd year in anticipation of submitting ACVAA credentials. All of the faculty within the section generally have research projects with funding, so the resident is not expected to design projects or procure funding.

IX. Resident Evaluation

Anesthesiology residents will be evaluated by faculty every 6 months for performance and completion of goals. Unsatisfactory performance, after ample performance reviews, can result in termination of the residency. Should a resident's performance be unsatisfactory, a written evaluation may be submitted every 3 months in order to allow the resident to review their performance and make appropriate changes, if possible or necessary.

X. Literature resources

The UW Medical School library is a 10 minute walk from the School of Veterinary Medicine. Additionally, electronic access to journals is virtually unlimited at the UW. The SVM has a study area, a lounge, and a delicatessen that is open weekdays from 7am to 1:30 pm. Residents are assigned a desk and computer in a shared office for use during off clinic time.

XI. Additional information

Additional information on specific requirements of residency training in Anesthesiology can be found at www.ACVAA.org. Interested individuals can contact Dr. Lesley Smith for more information at lesley.smith@wisc.edu.