



RESIDENCY TRAINING IN COMPARATIVE OPHTHALMOLOGY

The ophthalmology program is designed to provide training in the medical and surgical aspects of veterinary ophthalmology, including large and small domestic animals, animals used in laboratories and non-domestic animals. A primary objective is to prepare the resident for the successful completion of the American College of Veterinary Ophthalmologists board certification process. A second objective is to expose the candidate to all aspects of academic veterinary medicine including teaching, service work and research. During this time the candidate will learn relevant clinical and basic science research techniques, may take select formal courses in areas such as research ethics, clinical trials, statistics and grantsmanship, participate actively in the preparation of Federal grants, establish collaborative relationships with vision scientists at the University of Wisconsin-Madison and at other institutions, and actively pursue their own project with faculty guidance. This program is designed to fulfill the guidelines for residency training as established by the American College of Veterinary Ophthalmology and is an ACVO approved residency.

In the 4-year program the candidate will spend approximately 2.5 years in clinical veterinary ophthalmology and 1.5 years in a research fellowship in which the primary emphasis will be to teach the skills necessary for a career in academic ophthalmology. Two weeks per year are allotted for vacation, which is taken during off-clinic time.

The resident will be assigned both a clinical advisor and a research advisor (although this may be the same faculty member in some cases). The clinical advisor will assist the resident in completing the clinical training requirements as required by the ACVO Residency Committee. The research advisor has the responsibility of guiding the major research focus of the resident, but other faculty may be involved with smaller research projects and/or manuscripts with the resident.

Residents will attend resident orientation at the VMTH and will attend selected relevant portions of resident orientation at the UW Hospital. Whenever possible during the first few weeks of clinical rotation, the first year resident will be paired with the more senior resident to assist with clinical orientation.

CLINICS

New patients and rechecks are examined on Mondays and Wednesdays, while only rechecks are seen on Fridays. Surgeries are performed on Tuesdays and Thursdays. Emergencies (referral and non-referral) are seen as needed. Additionally, the resident may see cases on Fridays and Saturdays at our outreach clinics and the Morrie Waud Equine

Center in Delavan WI. Student level rounds are generally performed on Tues/Thurs/Fri afternoons. The resident is exposed to a varied referral and routine caseload. In addition to the development of technical proficiency, emphasis is placed on problem solving skills in the diagnosis and management of ophthalmology patients. The ophthalmology caseload is approximately 3-4000 cases/year, predominantly small animal, followed by equine, bovine and exotics. Approximately 180 surgeries are performed each year.

RESIDENT DUTIES AND RESPONSIBILITIES:

-Regular participation in the clinical activities of the ophthalmology section including evening and weekend emergency duty. The VMTH is committed to building strong relationships with its referring veterinarians and clients, therefore, an important part of the resident's duties includes timely communication with referring veterinarians and clients. All patient records, including test results and pathology reports, must be completed in a timely fashion. The resident is expected to see as many of the clinic cases as possible in order to maximum their exposure to clinical materials. Initially, faculty will follow the resident on every clinical case and will decrease this requirement as the resident's skill level increases.

- The resident will be responsible for at least 26 weeks of emergency duty each year. During the first year, the resident will call the on-duty faculty member for every emergency case. The faculty member will come in as back up whenever he/she deems it necessary. The resident will call the faculty member in a timely fashion to alert them to the possibility of an emergency case. The faculty will be available whenever necessary in years 2-4 for consultation or assistance on emergency cases.

-The resident should have in-depth knowledge about the diagnosis, pathophysiology, anatomy, potential surgery, and prognosis of all hospitalized cases. Preparation for surgical cases includes a review of the anatomy, surgical approach, technical details concerning the procedure, and post-operative care and complications. Additionally, the resident is responsible for knowledge of the current veterinary ophthalmic literature and relevant physician-based literature.

-Surgical training-Residents will participate in monthly training in phacoemulsification at the medical school and will additionally obtain cadaver specimens for further practice in both intraocular and extraocular surgery with the faculty members at the veterinary school. Residents are responsible for scheduling this time with individual faculty members, and should schedule at least one session per month during their off clinics time for at least the first 2 years of their residency. Residents will initially assist faculty on clinical cases. Residents must demonstrate proficient intraocular surgical skills on cadavers before participating in operations on clinical patients. All surgery on clinical patients will be done under the supervision of faculty until the resident has demonstrated sufficient skills to justify his or her operating independently. This time will vary for each resident, and will take at least 12-18 months.

-Rounds-residents are expected to attend weekly pathology rounds with Dr. Dubielzig, weekly journal club, and weekly grand rounds at the medical school. Residents are expected to regularly present at journal club, and should present at least yearly at the medical school grand rounds. Weekly journal club consists of an alternating schedule of multiple article review, Gelatt chapter review, clinic rounds (presentation of current interesting cases/potential board cases), and in depth article/subject reviews by the resident and faculty. In addition, the faculty present slide rounds during their scheduled article reviews.

-Residents are expected to attend short courses and seminars as directed at the medical school (orbital anatomy, oculoplastics, refraction) and to participate in the phacoemulsification course held at the veterinary school each year.

-Residents bear considerable responsibility for teaching students in clinics, and should develop a regular series of clinic rounds. Residents will also be expected to give one or more lectures to junior veterinary students in order to begin developing their own sets of lectures. Residents will also participate in the teaching of examination and surgery laboratories for students and continuing education courses.

-Attendance and presentation in the residents' forum at one (at least) meeting of the American College of Veterinary Ophthalmologists is expected. University funds may be available to partially subsidize the expenses involved in this, but this is ultimately the resident's responsibility.

-Attendance of the Basic Science Course in Ophthalmology. University funds may be available to partially subsidize the expenses involved in this, but this is ultimately the resident's responsibility.

-Formal coursework, particularly in statistics and research ethics, is optional but strongly encouraged. It is possible that the costs of attending these courses will be subsidized by the research project the resident is involved in but it is ultimately the residents responsibility.

-Research-Each three year resident must complete a research project in some area of ophthalmology during his or her training. The results must be documented in the form of a publication in a refereed journal. In the four year program, it is expected that one clinical and one basic science research project will be completed, with two resulting publications. The manuscript/s must be at least accepted for publication by the end of the residency. The expenses of conducting this research and publication will be borne, at least in part, by the faculty members involved. Residents are expected to submit at least one grant in for the ACVO resident grants.

Resident evaluation

The residents receive formal evaluations twice annually and meet with the faculty for discussion. The resident receives both oral and written evaluation at these meetings and is

given the opportunity to respond to the section. Areas assessed are clinical performance, basic science and clinical research, and progress in case reports and literature review for board preparation. Goals for the next 6-12 months are outlined in each evaluation, and progress towards those goals is periodically evaluated during the interim until the next review.

Continuation in the program and admission into the second, third and fourth years of the program are contingent upon satisfactory evaluation of the resident's performance as determined by the ophthalmology section and the Department of Surgical Sciences.

MS/PHD DEGREE PROGRAM

The resident may enroll concurrently in an M.S. program. The goals of this program are to increase knowledge in a selected area within the sciences and to obtain training in conducting research. Graduate programs leading to an M.S. degree offered through the University of Wisconsin-Madison in all biological science disciplines.

The four year resident may also elect to pursue a Ph.D. degree program. Although it may be possible to complete some course work and research in support of the Ph.D. during the residency, completion of degree requirements will require an additional 2-5 years, depending on progress during the residency. Admission to the graduate degree program requires a separate application from that for admission to the residency program, and graduate degree programs are administered by the Graduate School and the department through which the degree is granted. Additional information can be found at the website for the Graduate School (<http://www.wisc.edu/grad/>) or those individual academic departments.

CURRENT FACULTY

Dr. Ellison Bentley, Clinical Associate Professor, Comparative Ophthalmology
<http://www.vetmed.wisc.edu/people/bentleye>

Dr. Paul Miller, Clinical Professor, Comparative Ophthalmology
<http://www.vetmed.wisc.edu/people/millerp>

Dr. Gillian McLellan, Associate Scientist, Dept of Ophthalmology and Visual Science,
University of Wisconsin School of Medicine and Public Health, Clinical
Instructor, School of Veterinary Medicine
<http://www.vetmed.wisc.edu/people/mclellan>

Dr. Richard Dubielzig, Professor
<http://www.vetmed.wisc.edu/people/dubielzr>

PAST RESIDENTS

Phil Pickett. Dr. Pickett completed the program in 1986 and was admitted to the ACVO in 1987. He is currently a faculty member at Virginia-Maryland Regional College of Veterinary Medicine.

Keith Collins. Keith Collins completed the program in 1987 and was admitted to the ACVO in 1988. Dr. Collins also completed the Master's program in 1987. He is currently engaged in private practice in Waukesha, WI.

Deborah Friedman. Dr. Friedman completed the program in 1989 and was admitted to the ACVO in 1990. She is currently engaged in private practice in Fremont, CA.

Paul Miller. Dr. Miller completed the program in 1989 and was admitted to the ACVO in 1990. He joined the faculty at University of Wisconsin-Madison, School of Veterinary Medicine in 1990.

Stephanie Smedes. Dr. Smedes completed the program in 1991, and was admitted to the ACVO in 1991. She is currently engaged in private practice in Mill Creek, WA.

Annajane Marlar. Dr. Marlar completed the residency in 1994 and was admitted to the ACVO in 1995. She is currently engaged in practice at the Fort Worth Zoo, Ft. Worth, TX.

Kimberly Stanz. Dr. Stanz completed the residency in 1995 and was admitted to the ACVO in 1995. She is currently engaged in private practice in Lancaster, NY.

Charles Stuhr. Dr. Stuhr completed the residency in 1997 and was admitted to the ACVO in 1997. He is currently engaged in private practice in Wilton, CT.

George Abrams. Dr. Abrams completed the residency in 2000 and was admitted to the ACVO in 2000. She was the recipient of an NIH KO8 award and was awarded a PhD from University of Wisconsin-Madison in 2004. She is presently working at the Center for Scientific Review for the NIH.

Ellison Bentley. Dr. Bentley completed the residency in 2001 and was admitted to the ACVO in 2001. In 2001 she received the National Resident Award from the AAVC. She joined the faculty at University of Wisconsin-Madison, School of Veterinary Medicine in 2001.

Kathryn Diehl. Dr. Diehl completed the program in 2005 and was admitted to the ACVO in 2005. She is in practice in Madison, WI.

Renée Carter. Dr. Carter completed the program in 2006 and was admitted to the ACVO in 2007. She joined the faculty at Louisiana State University in 2006.

Simon Pot. Dr. Pot began the program in 2005 and joined the faculty at the University of Zurich in 2009.

Kathern Myrna. Dr. Myrna began the program in 2006 and is a current resident.

Filipe Espinheira. Dr. Espinheira began the program in 2009 and is a current resident.

Madison

Madison is the state capital of Wisconsin and has a population of more than 200,000 people including over 40,000 university students. It is located in south central Wisconsin; Milwaukee is 50 miles east, Chicago is 150 miles southeast and the Twin Cities of Minneapolis and St. Paul are 260 miles northwest.

Madison lies on an isthmus between two lakes and, with two additional smaller lakes, has 180,000 acres of water. The city has 150 parks including the six-acre Vilas Park Zoo and the 1,270-acre University of Wisconsin arboretum, which has 24 miles of foot trails. There are extensive bikeways and numerous tennis courts and golf courses.



Aerial View from Lake Monona looking towards Convention Center and Capital

Madison is a center for cultural events and it and the surrounding Dane County offer many natural attractions and recreational activities. Madison's elevation averages 860 feet above sea level, and the terrain in Dane County varies from open with rolling slopes to hilly with steep valleys.

The Madison public school system is among the best in the Midwest, and its innovative educational program is nationally recognized for its excellence.

Madison's economy is stable and diverse. The largest employers in the city are state government and the university. Insurance, finance, and real estate are major industries in Madison. The international headquarters of several large insurance companies are

located here. Several manufacturing companies are located in Madison, and they produce both durable and nondurable goods. Several federal offices, as well as a Veterans Administration Hospital, and many research and testing laboratories are located in Madison.

The University of Wisconsin-Madison

Founded in 1849, the University of Wisconsin-Madison is internationally known for its educational quality and outstanding faculty. The University ranks third among universities in the U.S. in federally funded research and first among all state supported universities in obtaining all types of research and development funds. The UW-Madison campus has more than 2,300 faculty members and 125 departments, including Schools of Law, Medicine, Nursing, Journalism, Agriculture, Engineering, Pharmacy, Business Education, Letters and Science, and Veterinary Medicine. Located a mile from the state capitol on a series of hills overlooking Lake Mendota, the attractive campus includes several gymnasiums which provide facilities for handball, racquetball, squash, swimming, jogging, basketball, badminton, tennis, and other sports.



Aerial View of Campus Overlooking Lake Mendota

The School of Veterinary Medicine

The School was established by Wisconsin legislative action in 1979. Construction of the new facility began in 1981 and was completed in March 1983. The school opened the doors to its first class of 80 students in August 1983. The school is accredited by the American Veterinary Medical Association Council on Education.

The main facility of the School of Veterinary Medicine (located on the University of Wisconsin-Madison campus) is a contemporary, four-story brick building which houses classrooms, teaching and research laboratories, faculty and administrative offices, and a state-of-the-art Veterinary Medical Teaching Hospital. The Teaching Hospital includes housing for approximately 80 large animals and 120 small animals.



Main Entrance of Veterinary School