

CARDIOLOGY RESIDENCY

Supplement

I. Introduction / Objectives

The cardiology residency program is intended to provide training that will lead to board certification by the American College of Veterinary Internal Medicine (ACVIM) in Cardiology; board certification of the trainee is a primary objective of the program. The specific training requirements for cardiology are specified in the General Information Guide (GIG) (<http://www.ACVIM.org/>). Additionally, the resident will complete course work and a research project that will lead to the Master of Science degree.

II. Prerequisites

A one-year internship or equivalent private practice experience is required.

III. Resident Advisor

- A. A Resident Advisor will be appointed by the Department Head and will be responsible for ensuring that the residency program guidelines are met.
- B. The Resident Advisor will direct the resident in scheduling clinical duties and teaching assignments; choosing a Graduate Advisor; preparing manuscripts for publication; and preparing for board certification examinations. Additional responsibilities include assessing the resident's performance and providing general mentoring and counseling as needed.
- C. The Resident Advisor will work closely with the Graduate Advisor (Major Professor) in order to coordinate the resident's clinical and graduate program responsibilities.

IV. Graduate Advisor

- A. The resident will select a Graduate Advisor (Major Professor) by the end of the first Fall Semester.
- B. The Graduate Advisor will be responsible for insuring that the Graduate Program Guidelines for the Master of Science degree are met. The Graduate Advisor will direct the resident in selecting a Graduate Committee, formulating a graduate plan of study, submitting a proposal for funding the Master's thesis research, preparing manuscripts for publication, and completing the Master's thesis.

V. Resident/Intern Committee

A Resident Committee will be formed as described in the Departmental Program Description.

VI. Case Management

- 1. Residents will see patients referred to the cardiology service, through in-

hospital consultations or as a primary care service. The resident will have primary care responsibility but will work under the direct supervision of the duty cardiologist.

2. The resident is responsible for communication with referring veterinarians. Generally, communication will take the form of telephone call(s) and a referral letter. The duty cardiologist will review and co-sign all referral letters.
3. There will be weekly rounds between the resident and the cardiologist on duty. Case discussions and reading assignments will be prominent features of this training activity.
4. The resident will maintain a cardiology case log in order to document that the case requirements for the residency program are being met. This log will be reviewed and approved by the Resident Advisor on at least an annual basis.

VII. Student Teaching

The resident will be responsible for using clinical cases in an instructional manner for senior veterinary students. Specialty medicine rounds are held five times weekly and are targeted at the level of the fourth year veterinary student. These sessions rotate among the "on-duty" clinicians for cardiology, dermatology and neurology. In a typical three week block, cardiology topics would be presented 6 times; the cardiology resident will attend all cardiology sessions.

VIII. Didactic Teaching

At the resident advisor's discretion, lecture responsibility may be assigned for a maximum of two hours of lecture the first year and five hours of lecture during each of the second and third years of the residency. Teaching assignments will conform with those established by the Office of Research and Graduate Studies.

IX. Emergency Duty

During the first and second years, cardiology residents will be required to rotate with other residents and interns in providing emergency duty for the Veterinary Teaching Hospital. Specific details are presented in a separate document entitled "Emergency Duty." The resident will also be assigned emergency duty for the discipline of cardiology to be shared with faculty cardiologists.

X. Seminars

Residents will participate in the Departmental Intern/Resident Seminar Program. First year residents will present a seminar at the Fall and Spring programs. Second year residents will present a seminar at the Spring Program, and third year residents will present a seminar at the Fall program.

XI. Research

A suitable research project must be completed and a manuscript must be submitted to a refereed journal prior to completion of the residency. The resident must work closely with their resident advisor and/or major professor to design a project and obtain either intramural or extramural funding for this project.

XII. Publication

In addition to the research publication, the cardiology resident must submit for publication either a review article or case report to a refereed journal by the end of the first year. Residents must work closely with their advisors or other medicine faculty members on these publications. All projects need to be approved by the resident advisor.

XIII. Clinical Conferences / Rounds

Regular attendance and participation in Journal Club, Case Conferences and Intern/Resident Seminars is mandatory.

XIV. Professional Development

Attempts to raise funds for resident attendance at a national veterinary or medical meeting will be sought for the second and third years of the program.

XV. Time Allocation

The following are guidelines that will be used when duties are assigned. The precise time periods may deviate from these guidelines at the discretion of the resident advisor. Vacation will be taken during times when the resident is not assigned to clinic duty.

Year I

1. Clinical Program - Time Allocation

1 week: orientation to College and Hospital

36 weeks: cardiology service

6 weeks: clinical rotations within the hospital – the precise periods to be spent with the internal medicine, neurology, and radiology services will be determined in consultation with the resident advisor.

9 weeks: research / scholarly activity / vacation

- a. The initial week will consist of orientation along with other beginning residents and interns. Timely arrival at Virginia Tech is imperative to include this week for a coordinated entry into the residency program.

- b. The majority of the clinical program will be spent in cardiology service, actively participating in the regular operation of the section. A brief assignment to the Equine Medical Center may be arranged.

2. Didactic Teaching

- a. The resident will participate in cardiology laboratories as directed by the Resident Advisor.
- b. Participation in cardiology continuing education courses will be encouraged

3. Research and Scholarly Activities

- a. Preparation and submission of a manuscript to a refereed journal will be required; this manuscript can take the form of a case-report or review article.
- b. A proposal for the Master's thesis research should be completed and submitted to a funding agency by spring of the first year.
- c. Attendance at the national ACVIM meeting is encouraged.
- d. Subject to the approval of the resident advisor, two-three weeks of vacation are allocated for the resident. The vacation time will be taken when the resident is not assigned to clinical cardiology duties.

4. Graduate Program

By the end of the first Fall Semester, the resident will choose a Graduate Advisor. The Graduate Advisor will then assume responsibilities for directing the resident's Graduate Program. By the end of the first year, the resident should submit a written plan of study to the Graduate Advisor, Graduate Committee, Resident Advisor and the Department Head for approval.

Year II

1. Clinical Program - Time Allocation

- 36 weeks: cardiology service duty
- 4 weeks: clinical rotations within the hospital – the precise periods to be spent with the internal medicine, neurology, dermatology and radiology services will be determined in consultation with the resident advisor.
- 12 weeks: research / scholarly activity / vacation

- a. The degree of responsibility for patient care, owner interaction and working with the professional students will be enhanced.
- b. Subject to the approval of the resident advisor an external rotation may be arranged at a medical school, veterinary school or private practice. Departmental funding will be sought, but is not guaranteed.

2. Didactic Teaching

Two lectures and assisting in three laboratories in the cardiovascular medicine course will be required.

3. Research and Scholarly Activity

- a. Twelve weeks are allocated for resident research/scholarly activity, as directed by the Graduate Advisor. This time will be spent working the protocol and collecting data
- b. An intern-resident seminar presentation will be required.
- c. Submission of a manuscript to a refereed journal will be required during the residency program.
- d. Attendance at the annual ACVIM Forum will be encouraged, as clinical responsibilities and funding availability permit. Presentation of an abstract at the ACVIM Forum will be encouraged.
- e. Subject to the approval of the resident advisor, two-three weeks of vacation are allocated for the resident. The vacation time will be taken when the resident is not assigned to clinical cardiology duties.

Year III

1. Clinical Program

37 weeks: cardiology service duty
15 weeks: research / scholarly activity / vacation

- a. The resident will be given increased responsibility in overall service activities while on the cardiology service subject to the approval of the resident advisor. The resident will be assigned primary responsibility for the clinical service time periods to be specified in consultation with the resident advisor. During these assignments, the resident will function as the primary floor cardiologist. A cardiologist will be assigned to consult with the resident on a daily basis and oversee the resident's activities to insure that service and teaching duties are met..
- b. Subject to the approval of the resident advisor, an external clinical rotation may be arranged.

2. Didactic Teaching

Presentation of three lectures and participation in four laboratories will be expected. Presentation in didactic continuing education programs will be encouraged.

3. Research and Scholarly Activities

- a. Fifteen weeks are allocated for resident research/scholarly activity, as directed by the Graduate Advisor. By the end of the third year, a

manuscript pertaining to the resident's graduate thesis must be completed and submitted to a refereed journal.

- b. Attendance at the ACVIM annual meeting will be required. The resident will take the cardiology certifying examination at this meeting.

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