ECVS-Residency Program at the Tierklinik Haar; Germany

Small Animal Referral Clinic
Keferloher Str. 25
D-85540 Haar/München, Germany

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GENERAL PROGRAMME DESCRIPTION

Content:

1. Structure of the programme
2. Length of the programme
3. Requirements
4. Selection
5. Graduate degree studies
6. Resident supervision
7. Employment

1. Structure of the programme

The following three year program will take place at the Tierklinik Haar.

There will be a 4 week externship at the Small Animal Clinic – Surgery of the University of Giessen, Germany (Head Prof. Dr. Martin Kramer; ECVS-Diplomates: C. Thiel, C. Peppler, J. Bokemeyer, A. Fischer).

The program corresponds to the guidelines for residency programs of the European College of Veterinary Surgeons (ECVS) and fulfils College’s requirements for admission to the speciality examination of the ECVS.

The collaboration between Tierklinik Haar and Giessen university clinic has permitted development of a complete residency program. There will be an interexchange between these clinics, as residents from Giessen will come to Haar as well.

Additionally, courses in Giessen and Davos or Salzburg (AO Vet.-courses) are included in the programme.

2. Length of the programme
This program is scheduled for three academic years (156 weeks) under the supervision of two ECVS diplomates (Tierklinik Haar). In Giessen ECVS diplomates and full professors of surgery are working and supervising (appendix 1).

Excluding five weeks of vacation, each academic year consists of surgical rotations, including soft tissue surgery, orthopaedics, minimal invasive surgery (arthroscopy, laparoscopy, thoracoscopy), surgical oncology and neurosurgery.

The resident will spend 4 weeks at the Giessen university hospital.

3. Requirements

I. Residents are obliged to have the “Approbation” approved by the “Bayerische Landestierärztekammer” and be legally allowed to practice in Germany.

II. They must have completed an official internship with a minimal duration of 12 months or a broad clinical training in well equipped private small animal practices or clinics with a minimal period of 24 months.

III. Command of German (verbal and written) and English will be an asset.

IV. They must submit a letter of intent with short and long term personal goals.

V. They must submit a complete CV with all previous academic and non-academic curricular activities.

VI. They must submit three letters of recommendation together with their application.

4. Selection

The candidates will be selected by the Small Animal Clinic Haar.

5. Graduate degree studies

Graduate degree studies are not included in the programme.

6. Resident supervision

The residents are supervised by two ECVS Diplomates.

The resident is rotating through surgery (orthopaedic, soft tissue and surgical oncology) service (supervised by two ECVS-Diplomates) and neurosurgery (supervised by a neurosurgeon, Diplomate ECVN) and 4 weeks through the surgery section at the Giessen university hospital. This rotation is scheduled to take place during his/her residency (see appendix 2 for details).

7. Employments

Successful applicants will be hired on a half position (VG-L) for a period of 3 1/2 years. Residents will receive their salary from Tierklinik Haar also during their work in the referral clinics.
SPECIFIC PROGRAMME DESCRIPTION

Content:

1. Surgical service rotation
2. Anaesthesiology
3. Diagnostic imaging
4. Pathology
5. Internal Medicine
6. Emergency service
7. Research
8. External rotations
9. Rounds, seminars and didactic training
10. Conferences
11. Surgical case log and resident activity log
12. Research and publications
13. Clinical teaching
14. Resident evaluation

1. Surgical service rotation
A total of 119 weeks is spent in the surgery section, Tierklinik Haar under the direction of a Resident Advisor. Additionally 4 weeks will be spent at Giessen university hospital.

The resident will be responsible for:
- receiving patients (clinical and diagnostic examinations)
- supervising daily management of hospitalised animals
- participation in surgical training of students (Tierklinik Haar is “Ausbildungsklinik” for students) and interns
- assisting or responsible for surgical procedures (secondary or primary surgeon)
- providing optimal clinical services and professional communications with the owner of the patient

The decision whether the resident will act as primary or secondary surgeon depends on the patients conditions (degree of difficulty) and the residents state of training.

2. Anaesthesiology
A total of 3 weeks (100 hours) is spent in the section of Small Animal Anaesthesiology at a Small Animal University Clinic. During the anaesthesiology rotation the resident participates in patient care, anaesthesiology and critical care peri- and post operatively, pain management and recovery. Also the resident has to join anaesthesiology rounds (case discussions, seminars and literature
reviews). At least one expert for Small Animal Anaesthesiology (Diplomate ECVA, see appendix 1) supervises the rotation.

3. Diagnostic imaging
A minimum of 2 weeks (80 hours) is devoted to diagnostic imaging section at Small Animal University Clinic. The resident will participate in routine and special diagnostic imaging procedures (e.g., ultrasonography (including colour Doppler, power angio and 3-D)), contrast studies like myelography and fluoroscopy or scintigraphy) of patients and emergency cases. The resident will participate in the rounds of the section of diagnostic imaging, case discussion and literature studies. The rotation is supervised by at least one ECVDI-Diplomate (see appendix 1). Computerised tomography (CT) and Magnet Resonance Imaging (MRI) devices must be on site.

4. Pathology
A minimum of 80 hours is devoted to pathology (section of small animal cadavers), histology and cytology. The resident will attend the rounds in the Pathology Department of a German University including macroscopic and microscopic pathology under the supervision of at least one ECVP-Diplomate (see appendix 1).

5. Internal Medicine
A minimum of 2 weeks (80 hours) is devoted to internal medicine. The resident will participate in all work and seminars in the internal medicine department of a German university clinic. Rotation is supervised by at least one ECVIM-CA Diplomate.

6. Emergency service
The resident has to participate in the emergency service, including night and weekend shifts. The daytime period is included in the surgical service rotation.

7. Research
The resident will devote a minimum of 14 weeks to research or clinical investigations, case discussions, seminars, literature reviews and preparation of scientific manuscripts (e.g., case reports, retrospective or prospective studies) or to prepare presentations for conferences.

8. External rotations
A maximum of 4 weeks may be spent on external rotation. During his/her second and third year, the resident is supposed to attend one beginner and one advanced AO-Vet course in Davos, Giessen or Salzburg.

9. Rounds, seminars and didactic training
Residents are expected to deliver case and problem based rounds to their peers and undergraduates. They are also required to prepare and deliver seminars during the course of their
residency and to attend regular morning rounds, resident seminars, journal club, exam preparation
review sessions and occasionally rounds and lectures from visiting lecturers.

“Visite” (morning rounds) - Formal clinical rounds (small animal surgery) will be held daily with
residents and interns presenting hospitalised cases. Clinical plans and results for in-hospital cases
will be discussed with staff members.

Resident seminars - Clinic wide (Internal Medicine, Neurology and Surgery) resident seminars
are held every other week on Tuesday morning (7:15-8:00). Residents will participate in
presenting clinical and/or basic research topics.

Case presentations - Residents will participate in the weekly surgical case presentations.

Journal or “Tobias” Club: Surgery Journal reviews or chapter discussion of “Tobias” take place
once weekly.

10. Conferences
Residents are encouraged to attend the annual scientific meeting of the ECVS and to participate
once to the resident forum (financial support by Tierklinik Haar).

The resident will be encouraged to attend at least once the BSAVA-meeting in Birmingham,
England and as many local meetings (e.g. DVG-Jahrestagung, BPT congress) as feasible. The
Surgery Service provides financial support if the resident presents an abstract (oral or poster).

11. Surgical case log and resident activity log
At the Tierklinik Haar an electronic database is available to maintain a surgical case log and a
resident activity log that complies with the guidelines of the European College of Veterinary
Surgeons. Both logs will be reviewed by the Resident Advisor at each evaluation.

12. Research and publications
Residents are expected to fulfil the ECVS research and publication requirements.

The resident is obliged to start a research project during the first year of the residency. The
project should be completed at the end of the second year or at the first half of his/her last year.

He/she is expected to present the results of the research at the Annual Scientific Meeting of the
ECVS during the resident forum in the third year of his/her residency.

The goals are to become acquainted with clinical research, to publish an abstract, to present new
material orally to peers, and finally, to publish these findings in a refereed scientific journal.

The resident is expected to have a second publication (eg clinical case report; retrospective study)
finished at the end of the third year of his/her residency.

13. Clinical teaching
The resident will participate in the clinical education of veterinary students and graduate
veterinarians.
14. Resident evaluation

The resident supervisor (Christian SchwanDt) will participate in each resident evaluation and discuss the progress of the resident.

Evaluations take place twice per year.

Program director, resident supervisor and resident will discuss the progress made, plans for the forthcoming months and career goals.
GENERAL INFORMATION ABOUT THE SMALL ANIMAL CLINIC

Content:

1. Personal structure
2. Special consultation hours
3. Case load

1. Personal structure:

Diplomates

Internal Medicine

Christian Stockhaus
  Diplomate ECVIM-CA
  Dr. med. vet.
  PD Dr. med. vet. habil.
  Fachtierarzt für Kleintiere (specialisation in small animal medicine)
  Fachtierarzt für Innere Medizin (specialisation in internal medicine)

Desiree Kruse
  Diplomate ECVIM-CA
  Dr. med. vet.

Surgery

Stefan Scharvogel
  Diplomate ECVS
  Dr. med. vet.
  Fachtierarzt für Kleintiere (specialisation in small animal medicine)
  Fachtierarzt für Chirurgie (specialisation in surgery)

Christian Schwandt
  Diplomate ECVS
  Dr. med. vet.
  Fachtierarzt für Kleintierchirurgie (specialisation in small animal surgery)

Neurology
Konrad Jurina  
Dipl. ECVN  
Dr. med. vet.  
Fachtierarzt für Kleintiere (specialisation in small animal medicine)

Tanja Steinberg  
Dipl. ECVN  
Dr. med. vet.

Oncology
Fabienne Schwandt (maternal leave)  
Dipl. ACVIM-CA/Oncology  
Dr. med. vet.

Cardiology
Lisa Keller  
Dipl. ACVIM/cardiology  
Dr. med. vet.  
Zbez. Kardiologie

Diagnostic Imaging
Barbara Posch  
Dipl ECVDI  
Dr. med. vet.

Senior physicians
Natalie Häussler  
Dr. med. vet.  
Fachtierärztin für Innere Medizin (specialisation in internal medicine)

Christian Schlichtherle  
Dr. med. vet.  
Fachtierarzt für Kleintiere (specialisation in small animal medicine)

Diane Meiler  
Dr. med. vet.  
Fachtierarzt für Kleintiere (specialisation in small animal medicine)

Birte Hohenstein  
Dr. med. vet.  
Fachtierarzt für Kleintiere (specialisation in small animal medicine)
Ten full time physicians, three part time physicians; all with at least 2 years of practical knowledge.

2. Special consultation hours
Special consultation hours are being held for dermatology, internal medicine, orthopedics, ophthalmology, oncology, small pet animals (eg. rabbits, guinea pigs).

3. Internship programme
Since 2007 an internship-program has been established.

4. Case load
The case-load of Tierklinik Haar consists of nearly 10,000 annual patients (approximately 15-20% surgery patients, including orthopaedics, neurosurgery and soft tissue), and about 2,000 in-patients (about 30% surgery patients). We have more than 1500 surgical procedures which are divided through three groups as follows: orthopaedics and fractures (500 procedures), neurosurgery (120 procedures), soft tissue surgery (800 procedures), 50 ophthalmologic surgeries and 150 dentistries. Tierklinik Haar is a still growing small animal hospital with mainly referring cases (about 70%). This status as a second or third opinion clinic leads to a extremely wide variety of different surgeries.
DETAILED DESCRIPTION OF THE FACILITIES, EQUIPMENT, SERVICES AND THE PREMISES

Content:
1. Surgical facilities
2. Other facilities and equipment
3. Radiographic services
4. Pathology and clinical pathology services
5. Library
6. Medical records

Tierklinik Haar is a private mainly referral (70% referrals, 30% primary patients) hospital for small animals (dogs, cats and small pet animals) just outside of the city of Munich. The clinic has a floor space of 1500 m². At the moment there are 15 veterinarians working in different areas, mainly surgery, internal medicine, diagnostic imaging, neurology/neurosurgery, oncology, dermatology and dentistry. Additionally 16 technicians, 10 students (working on weekends and night-duties) and 1 person for administration are employed.

1. Surgical facilities
There are modern surgical equipment and facilities available in the clinic:
Surgeries are performed in three surgical theatres with a total of five operating tables:
- 1 aseptic surgical theatre with 1 operating table
- 1 aseptic surgical theatre with 2 operating tables
- 1 septic surgical theatre with 2 operating tables
They are constructed and maintained consistent with current concepts of aseptic surgery. One separate room for non-sterile surgical procedures (like dentistry, abscess treatment or dirty wound management) with 1 operating table for non-sterile procedures is available in addition.
One of the surgical rooms is equipped for minimal invasive surgery (eg. arthroscopy, laparoscopy, thoracoscopy).
One of the surgical rooms is equipped with fluoroscopy (movable to different rooms).
Each operating table is equipped with anaesthetic machine with positive-pressure ventilation for assisted inhalation-anaesthesia using medical gases coming from a central unit. Routine monitoring of endexspiratoric carbon dioxide and the capnogram, heart monitoring (ECG), pulsoxymetry, pulspethysmography and non-invasive blood pressure (oscillometric device) can be performed. If necessary and indicated, monitoring of arterial blood pressure, central venous pressure, cardiac output and spirometry is possible. The inspiratory and expiratory concentration of oxygen, nitric oxygen, carbon dioxide, and the volatile anaesthetics can be measured. For patient warming the operating tables have a bair-hugger warming system.
Each operating place is equipped with electrosurgery (uni-, bipolar) and a suction unit.
The surgical section further contains outside the surgical rooms one room for patient preparation (three tables) with anaesthetic units and separate rooms for patient recovery.
In addition, there is a central facility for cleaning, autoclaving and storing of surgical instruments and equipment. Several full sets of instrumentations for the different fields of small animal surgery (e.g. orthopaedics, fractures, soft tissue, ophthalmology, dentistry, neurosurgery, minimal invasive surgery) are available.

For the documentation of surgical cases, photographic, video and film equipment are available. In addition, there were complete units for presentations, provide digital fotos, clip montages and digitalisation of slides.

2. Other facilities and equipment

The clinic has an Intensive Care Unit (ICU) with 4 cages, including three small and a large oxygen cage. The unit is equipped with 4 infusion pumps, oxygen supply, heating lamps and bair huger warming equipment. There is equipment for telemetric surveillance of cardiac rhythm.

Additionally, there are separate wards for dogs and cats that can house more than 45 patients; one ward for small pet animals (e.g. rabbits, guinea pigs and other rodents) and a ward for patients with infectious diseases.

There are 7 rooms exquisite for consulting out-patients available.

Also available in the clinic are the following facilities or equipment:

- Digital radiography unit (direct)
- Dicom pacs unit (for all pictures of the diagnostic imaging units)
- Ultrasonographic equipment (thorax, abdomen, soft tissue, heart, eye; with colour flow, doppler unit)
- Fluoroscopy
- Computed tomography (multi-slice)
- Magnetic resonance imaging
- Radiation therapy facility (off-site)
- Nuclear medicine (Scintigraphy) (off-site)
- two full equipped Endoscopy towers (one for internal medicine: GI equipment; Broncho-, Cysto, Rhinoscopy; one for surgery: Thoraco-, Laparo-, Arthroscopy)
- Clinical pathology facility (ultramodern ZEISS microscope with digital recording)
- Electrocardiography
- Electromyography and NLG
- Brainstem auditory evoked response equipment
- Blood pressure measurement
- Puls oximetry
- total parenteral nutrition capability
- blood transfusion capability
- Veterinary library incl. literature searching capabilities
- Computerized medical records with searching capabilities
- Digital "diathek"
- Intensive care facility (24 hours)

3. Radiographic services

Diagnostic Imaging in small animals is a part of the Small Animal Clinic. The diagnostic imaging procedures include direct digital radiography (approximately 60 patients daily), sonography (3
High-end machines), computed tomography (16 slices), magnetic resonance imaging (0.2 Tesla MRI), scintigraphy (outside) and endoscopy (see above).

4. Pathology and clinical pathology services

Clinical pathology services are available in the Small Animal Clinic, including a biochemical laboratory, a haematological laboratory, coagulation, blood-gas and a cytology service.

Anatomic and histologic pathology is available in the Institute of Veterinary Pathology of the University of Veterinary Medicine Munich or by a private pathology institute (Dr. von Bomhard, Dipl. ECVP), reports are retained and retrievable.

The cytological diagnoses are made by staff members of Tierklinik Haar (Dr. Stockhaus did his “Habilitation” in clinical pathology/cytology)

5. Library

The library of the Tierklinik Haar contains a large variety of standard surgical textbooks and periodicals.

The residents have free access to this library and to electronic data services for on-line access to scientific publications. The libraries of the State of Bavaria (one of the biggest in europe) and the Faculty of Veterinary Medicine, University of Munich, are easy accessible.

Computers are available for electronic data service for online retrieval of scientific publications and journals.

6. Medical records

A complete medical record of each patient is maintained in a digital system at the Tierklinik Haar. These records are open to all residents. Central database (software) of all cases is available in the clinic.

Each individual database of each patient of small animal surgery section is available for the resident.
APPENDIX 1 – SUPERVISING DIPLOMATES
Staff in support of the Program at the various locations

1. Surgery

Dr. Stefan Scharvogel  
Program Director  
Diplomate ECVS  
Fachtierarzt für Chirurgie  
Fachtierarzt für Kleintiere

Dr. Christian Schwandt  
Resident Advisor  
Diplomate ECVS

Giessen University Clinic  
Prof. Dr. Martin Kramer (Head); Full Professor of Small Animal Surgery  
Dr. Cetina Thiel, Dipl. ECVS  
Dr. Christine Peppler, Dipl. ECVS

2. Internal Medicine and Oncology

Rotation: depending to the University Clinic

PD. Dr. Christian Stockhaus  
Dipl. ECVIM-CA  
Fachtierarzt für Innere Medizin  
Fachtierarzt für Kleintiere

Dr. Fabienne Schwandt (maternity leave)  
Dipl. ACVIM-CA (Oncology)

3. Neurology

Dr. Konrad Jurina  
Dipl. ECVN  
Fachtierarzt für Kleintiere

4. Anaesthesiology

Rotation: depending to the University Clinic

5. Pathology
Rotation: depending to the University Department

6. Diagnostic imaging

Rotation: depending to the University Clinic

Dr. Barbara Posch
Dipl. ECVDI
APPENDIX 2 - PROGRAM PER YEAR

ECVS-Residency program
Tierklinik Haar, small animal referral clinic Haar

Program description

FIRST YEAR:

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical service rotation (Haar)</td>
<td>36</td>
</tr>
<tr>
<td>Surgical service rotation (Giessen)</td>
<td>04</td>
</tr>
<tr>
<td>Anaesthesiology (university clinic)</td>
<td>03</td>
</tr>
<tr>
<td>Research, Continuing education</td>
<td>04</td>
</tr>
<tr>
<td>Vacation</td>
<td>05</td>
</tr>
<tr>
<td>Total duration</td>
<td>52</td>
</tr>
</tbody>
</table>

Surgical service rotations
The schedule is designed to allow the resident’s rotation through all surgery sections (soft tissue surgery, orthopaedics (including arthroscopy), neurosurgery, ophthalmologic surgery and dentistry) of Small Animal Clinic (Surgery) in Hannover.

The resident rotates 4 weeks at the Small Animal Clinic – Surgery of the University of Giessen, Germany, through the different fields of small animal surgery.

Anaesthesiology
The Anaesthesiology period will be spent in the section of small animal anaesthesiology at a german university clinic under supervision of an ECVA-Dipl. The resident will participate in patient care, case discussion, seminars and literature reviews.
Program description

SECOND YEAR:

<table>
<thead>
<tr>
<th>Rotation</th>
<th>weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical service rotation (Haar)</td>
<td>38</td>
</tr>
<tr>
<td>Diagnostic imaging (university clinic)</td>
<td>02</td>
</tr>
<tr>
<td>Research, Continuing education</td>
<td>04</td>
</tr>
<tr>
<td>Vacation</td>
<td>05</td>
</tr>
<tr>
<td>Internal medicine (university clinic)</td>
<td>03</td>
</tr>
<tr>
<td>Total rotation</td>
<td>52</td>
</tr>
</tbody>
</table>

Surgical service rotations
The resident rotates in Haar (Small Animal Surgery) through the different small animal surgery sections (e.g. soft tissue surgery, orthopaedics, neurosurgery, surgical oncology).

Diagnostic imaging
The Diagnostic Imaging period will be spent in the section of small animal diagnostic imaging at a german university clinic under supervision of an ECVA-Dipl. The resident will participate in patient care, case discussion, seminars and literature reviews.

Internal medicine
The resident rotates through the different sections of small animal internal medicine. This period will be spent at a german university clinic under supervision of an ECVA-Dipl. The resident will participate in patient care, case discussion, seminars and literature reviews.
APPENDIX 2 - PROGRAM PER YEAR

ECVS-Residency program
Tierklinik Haar, small animal referral clinic Haar

Program description

THIRD YEAR:

<table>
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<tr>
<th>Rotation</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical service rotation (Haar)</td>
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</tr>
<tr>
<td>Pathology (university department)</td>
<td>02</td>
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<tr>
<td>Research, Continuing education</td>
<td>04</td>
</tr>
<tr>
<td>Vacation</td>
<td>05</td>
</tr>
<tr>
<td>Total rotation</td>
<td>52</td>
</tr>
</tbody>
</table>

Surgical service rotations
The resident rotates in Haar (Surgery) through the different small animal surgery sections (e.g. soft tissue surgery, orthopaedics, neurosurgery, surgical oncology).

Pathology
The Pathology period will be spent in the Department of Veterinary Pathology at a german university under supervision of an ECVA-Dipl. The resident will participate in macroscopic section, microscopical examinations (histology and cytology), case discussion, seminars and literature reviews.

Research/learning
This period is devoted to completing the publications that are required to be admitted to the ECVS Diploma examination. The resident is expected to present the results of her or his research as an abstract at the Annual Scientific Meeting of the ECVS.

Christian Schwandt, Dr.med.vet., Dipl. ECVS
(Resident Advisor)

Stefan Scharvogel, Dr.med.vet., Dipl. ECVS, Fachtierarzt für Chirurgie und Kleintiere
(Program director and Resident supervisor)