

European College of Aquatic Animal Health

Policies and Procedures

2016

The Specialist in aquatic animal health (AAH) will have a good knowledge and understanding of the aetiology, epidemiology, pathogenesis, diagnosis and control of infectious and non-infectious diseases directly or indirectly affecting aquatic animals and the maintenance of their health and welfare. AAH also includes production control systems, quality of aquatic animal products and their significance for public health, national and international legislation, disease control programs, and management. The Specialist shall furthermore have working knowledge on zootechnical issues, ethology and welfare, nutrition, husbandry and genetics of aquatic animals.

Chapter 1: Introduction

The European College of Aquatic Animal Health (ECAAH) is a veterinary specialty organization. It is founded as part of the program for veterinary specialization in Europe.

The primary aim of the ECAAH is to improve and promote the quality of animal health by making specialized knowledge and skills in Aquatic animal health/medicine available for the benefit of animals.

The primary objectives of the College shall be to advance aquatic animal medicine/health in Europe. This covers all aquatic animals (fish and aquatic invertebrates such as shellfish, shrimp, mollusks, etc.) whether, maintained in captivity, cultured or wild. However, aquatic mammals, birds and reptilians will not be included. It also comprises water quality, welfare, zoonoses, therapeutics and relative legislation. The objective is to increase the competency of those who practice in this field by:

- a) Establishing guidelines for the post-graduate education and training as a prerequisite to become a specialist in the specialty of aquatic animal health.

b) Examining and authenticating veterinarians as specialists in aquatic animal health to serve the veterinary patient, its owner and the public in general, by providing expert care for aquatic animals with diseases.

c) Encouraging research and other contributions to knowledge relating to pathogenesis, diagnosis, therapy, prevention, welfare, zoonoses and control of diseases directly or indirectly affecting aquatic animals and promoting communication and dissemination of this knowledge.

d) Maintaining a register of the practicing members of the College so as to inform the EBVS and thereby allowing these members to represent themselves as specialists in Aquatic Animal Health.

The specialist in Aquatic Animal Health (AAH) will be working in academic setting, referral practice or aquaculture sector or pet industry. The main part of his/her time will be devoted to AAH; this will include both primary case management and supervisory case management via leadership as well as teaching and research activities.

Chapter 2: Process for becoming a Diplomate

There are a number of routes that can be followed to become an ECAAH Diplomate.

1. Founding Diplomates

a. Members of the Interim Executive Committee with proper credentials are proposed by the COC and appointed by EBVS. The members of the COC may also be appointed members of the Interim Executive Committee.

b. De Facto Specialists (appointed in the first 5 years) with proper credentials as appointed by the Members of the Interim Executive Committee.

2. Standard Residency training Program with submission and acceptance of credentials and successful completion of the Certifying Examination.

3. Alternative Residency Training Program with submission and acceptance of credentials and successful completion of the Certifying Examination.

2.1. Founding Diplomates

2.1.1 Members of the Interim Executive Committee (IEC)

Criteria that must be fulfilled by IEC Specialists are as follows:

The Members of the Interim Executive Committee are not required to submit to examination to become a Diplomate and designated “Founding Diplomates”. Interim Executive Committee Member status is only granted by the EBVS to a small number of individuals at the time the College is being established. The distinction is reserved for only the most distinguished and experienced members of the field. The Interim Executive Committee of the College should normally exist for a period of up to five years and members must meet the following criteria:

- i. Be initiators in their field;
- ii. have achieved distinction in the field, and have qualifications achieved by training and experience far exceeding those proposed as necessary for candidates to take the certifying examination of the organisation;
- iii. be internationally recognised as a qualified specialist by peers, and
 - a) have at least ten years experience practising the speciality, and by teaching, research, and practice have contributed significantly to the development of the speciality, and
 - b) have advanced training (at European Qualifications Framework, level 8) in the speciality; have demonstrated competency through teaching, research and practice in the speciality to which the individual devotes most of his or her professional time, and
 - c) be author of at least ten significant publications in peer-reviewed journals resulting from the research or practise in the speciality;
- iv. be uncontroversial to the majority of the membership;
- v. spend at least 60 per cent of their time practising the speciality, based on a normal working week of 40 hours, for the last at least 10 years;
- vi. be practising in Europe;
- vii. practise scientific, evidence-based veterinary medicine, which complies with animal welfare legislation;
- viii. display the willingness to contribute to the growth of the College (e.g. by training residents);
- ix. apply high level knowledge and skills at the forefront of his/her specialist area of (name of specialism) to their own professional work;
- x. perform at a high level of competency through teaching, research and practice in their speciality area;
- xi. promote aptitude and proficiency in the field of (name of specialism);
- xii. demonstrate the ability to communicate their ideas and conclusions clearly and effectively to specialist and non-specialist clients and audiences;

2.1.2. De Facto recognized Diplomate

Starting in June 2014 and continuing for 5 years after the provisional recognition of the College, the College will solicit applications from individuals who fulfill the criteria to be a De Facto Specialist. A Diplomate recognised “de facto” is a Founding Diplomate that is appointed by the Interim Executive Committee. De facto-recognised Diplomates are not required to submit to examination to become a Diplomate but they are expected to contribute to the running of the College and the training of residents. Recognition of a small number of de facto Diplomates is possible up to five years after the EBVS has granted provisional recognition. To be appointed one must meet the same criteria as the Members of the Interim Executive Committee (Section 2.1.1., i-xii above), including two letters of support. Applications will be solicited via personal letter, open advertisement in journals or congresses.

Each application will be reviewed in detail by three (3) members of the IEC. The IEC may also require candidates applying for De Facto Diplomate status to undergo further assessment.

2.1.4 Standard Residency Training Program

The Residency Training Program requires a Program Director, approved Residency Training Facilities and an approved Residency Training Plan including details of Supervisors. The Program Director must be a Diplomate of the ECAAH or its equivalent, as defined by the ECAAH Credentials Committee and EBVS Policies and Procedures.

The internship together with the Residency Training Program should comprise a minimum time period of four (4) years. The period can be taken consecutively. The Credentials/Education committee can allow the training to take place on a part time basis as long as the total time is equivalent to at least four years, and the total time does not exceed six years.

In case of maternity (leave), illness or under exceptional circumstances a prolongation is possible. The duration of the prolongation is agreed with the Credentials/Education committee.

More specifically:

- i. An internship is mandatory and composed of a broad range of clinical assignments within one of the major divisions of veterinary medicine. This first period of one (1) year (minimum) must be an internship in a wide area of veterinary activity beyond the professional degree associated with aquatic medicine or general veterinary practice, or its equivalent, as defined by the ECAAH Education Committee.
- ii. A second period shall comprise at least three (3) year standard Residency Training Program with an ECAAH Diplomate as the Program Director as approved by the ECAAH Education Committee. The period can be taken consecutively or on a part time basis as long as the total time is at least three (3) years and does not exceed six

(6) years. Each Program Director shall prepare a statement that the candidate has satisfactorily completed the approved time of training. There shall be no restriction of training institutions as long as they meet the requirements for approved residency.

Details of requirements for Applicants and for Residency Training Programs can be found in Chapter 3 of this document.

2.1.5. Alternative Residency Training Program

A veterinarian whose circumstances do not permit enrolment in a standard residency programme may submit an **alternate programme** to the College, in conjunction with his/her supervisor, outlining the resources available to them, for advanced study and experience. The alternate programme is not approved for anyone other than the Resident in question. The alternate programme must be approved by the Education Committee of ECAAH before the Resident embarks on it, and the total length of this programme cannot be shorter than the standard residency programme. The precise form of each individual programme is at the discretion of the Education Committee. The total time of an alternate programme must not exceed six years. A resident on an alternate training programme must spend the equivalent of at least 60% of 3 years working in the practice of his/her speciality, under direct supervision of a Diplomate of the College.

Alternative programs must have a Program Director who is an ECAAH Diplomate and who is responsible with the Applicant for preparing the program details

Chapter 3: European College of Aquatic Animal Health Residency Program

I. Definition:

An AAH **Residency Program**, is a training program allowing a graduate veterinarian ("Resident") to acquire in-depth knowledge of AAH and its supporting disciplines under the supervision and guidance of a Diplomate of the ECAAH ("Diplomate") or its equivalent, as defined by the ECAAH Credentials Committee.

IIa. General objectives of the Training Program:

- A. To promote aptitude and clinical proficiency in AAH .
- B. To instruct the Resident in the science and practice of AAH and its supporting disciplines.
- C. To provide the Resident with the opportunity to pursue career goals in

teaching, research, clinical service, and/or specialty practice.

IIb. Detailed objectives of the AAH Training Program.

A. Knowledge and skills concerning professional contacts and transfer of knowledge.

The specialists should be able to:

- express thoughts clearly, in oral as well in written form in the English language
- approach problems in an analytic, scientific way to find solutions and be able to assign priorities for these
- organize work efficiently
- make effective use of the available literature and find required information quickly
- develop scientific activities in order to contribute to the quality of the Specialty

B. General knowledge and skills concerning the specialty.

The specialist shall:

- be able to assess the significance of health matters for individual held in captivity, cultured or wild groups of animals under the specific conditions under which they are held and the consequences for the owner
- be acquainted with the main current theories, principles and problems of the specialty
- maintain up to date knowledge through congresses and literature
- be acquainted with the structures, objectives, approaches and problems of the veterinary profession and specifically with regard to the specialty
- be acquainted with the social role of the specialty
- conform to modern standards of skills and equipment.

C. Knowledge and skills concerned with obtaining help for problems that lie outside the specialty and/or facilities.

The specialist shall:

- keep abreast of new developments in the specialty and become familiar with new methods, before applying these in practice
- understand the limitations of the specialty
- understand the possibilities that other specialties have to offer
- be familiar with the potential of multidisciplinary co-operation.

D. Knowledge and skills concerned with working as a professional specialist

A specialist should have extensive practical experience within the specialty. Through experience the specialist should have developed the self-confidence, self criticism and sense of responsibility that are essential for the practice of the specialty.

E-1. Knowledge and skills concerned with the general practice AAH / medicine.

A specialist in AAH shall be able to handle emergencies in aquaculture and pet animals.

E-2. Knowledge and skills concerned with the practice of AAH.

A specialist in AAH:

- must have a working knowledge of those aspects of AAH medicine and management / husbandry which are applicable to the specialty
- must be acquainted with the most common aquatic animal diseases
- should be able to perform diagnostic and therapeutic procedures
- should be able to take actions in these species on the basis of knowledge of legislation, preventive medicine, zoonoses, nutrition and husbandry.

F. Specific knowledge and skills with regard to practising the specialty of AAH.

Areas and level of knowledge:

-Aquatic Environment and Life Support Systems

Water quality includes all the physical, chemical and biological characteristics of water that regulates its suitability for the health of aquatic organisms and their ecosystem. Poor water quality is often the cause of morbidity and mortality in aquatic animals. Knowledge, skills and experience in this subject matter are critical for practicing aquatic veterinary medicine. Given the intimate relationship that aquatic organisms have with the surrounding environment, a candidate should demonstrate thorough understanding of this environment.

Examples are:

- Chemical stressors and their effect on aquatic animal health/environment
- Common chemical water quality abnormalities
- Techniques for the assessment/monitoring of water quality parameters
- Interpretation of water quality parameter results
- Appropriate treatment of water quality abnormalities
- Toxins and pollutants
- Effects of medications and therapeutics on water quality
- Physical stressors in the aquatic environment and their effect on aquatic animal health/environment. Including: stocking density, improper husbandry/life-support system, tank/pond design, inter/intra-species aggression, handling and transport
- Biological stressors in the aquatic environment and their effects on aquatic animal health
- Species differences in regards to their water quality requirements
- Interaction of various species in the aquatic ecosystem and its effect on aquatic animal health
- Environmental factors that affect the development of disease

- Taxonomy, Anatomy and Physiology

Candidate should demonstrate knowledge, skills and experience necessary for the practice of aquatic veterinary medicine and surgery of the basic anatomy and physiology of major aquatic animal taxa.

Examples are:

- Taxonomic relationship of aquatic Phyla
- Scientific and common names of significant aquatic animal species

- Anatomy and physiology of organ systems including:
- Musculoskeletal and integumentary
- Digestive (gastrointestinal), nutritional physiology
- Circulatory and Respiratory
- Osmoregulatory and waste excretion
- Reproductive and Endocrine
- Reticuloendothelial and Immune
- Nervous

- Husbandry and Industries

Candidate should demonstrate an understanding of the key industry sectors, economics, health issues and husbandry practices associated with the captive maintenance of aquatic animals (e.g., aquaculture, ornamental pet trade, public aquaria exhibits,) and with wild harvest of aquatic animals for food and pets.

Examples are:

- Aquaculture Industry – Food sector and Ornamental sector
- Wild Harvest – Food and Ornamental Sectors
- Public Aquaria and Zoo Aquatic Animal Exhibition
- Conservation/Resource management captive breeding programs
- Animal Handling Techniques
- Animal Holding System Design and General Management
- Collection, Transport, Acclimation
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CLINICAL SKILLS

- Pathobiology and Epidemiology of Aquatic Animal Diseases

Candidate should demonstrate an understanding of environmental conditions and pathogens that cause diseases in aquatic animals, the pathological changes that occur in the animals, and the clinical signs of important aquatic animal diseases in order to determine the cause of the disease and the course of action or treatment, and assess the risk of contagion.

Examples are:

- Disease identification, prevention, control, treatment, eradication decisions.
- Non-infectious diseases:
- Nutritional deficiencies
- Water quality/temperature abnormality
- Toxicity
- Traumatic injuries
- Genetic disorders

- Neoplasia
- Infectious diseases:
 - Viruses
 - Bacteria
 - Fungi
- Parasitic diseases:
 - Protozoa
 - Metazoa
- Epidemiology
- Biosecurity, pathogen exclusion or containment methods.
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- Diagnostics and Treatment of Aquatic Animal Diseases

Candidate should demonstrate a good understanding of the diagnostic procedures and treatments, including fundamental theoretical knowledge, as well as practical experience with clinical and laboratory disease diagnosis and treatment of infectious diseases and pathological conditions.

Examples are:

- Principles of Laboratory Diagnosis:
 - Sample collection for laboratory examination
 - Proper shipment of samples for diagnostic purposes
 - Principles of sample custody
 - Quality Assurance and Quality Control (QA and QC)
 - Diagnosis of bacterial infections
 - Diagnosis of viral infections
 - Diagnosis of mycotic infections
 - Diagnosis of parasitic diseases
 - Diagnosis of neoplasia
 - Diagnosis of traumatic injuries
 - Diagnosis of toxicities
- Principles of Prophylaxis and Disease Control
- Therapeutics, Biologics, Vaccines and other treatment approaches

- Clinical Veterinary Experience and Client Communications

Candidate should demonstrate competency with basic clinical procedures, diagnostic tools and techniques, and with client or industry communication.

Examples are:

- Clinical Examination, including:

- Taking a case history adapted to aquatic animals (e.g., include water quality)
- Physical examination techniques
- Blood collection and analysis
- Examination of cytology & biopsy wet mounts
- Postmortem examination
- Sedation/Anesthesia
- Basic imaging techniques
- Basic surgical procedures
- Common therapeutic approaches
- General Case management
- Client Communications with aquarists, aquaculture producer/farmers, wild animal collectors, facility managers, exporter/importer/wholesaler, retailer and hobbyist/pet owners.

- Public Health, Zoonotics and Seafood Safety

Candidate should demonstrate knowledge of aquatic zoonotic diseases pertinent to their field of practice. Candidate should also demonstrate understanding of the role of the veterinarian in public health through education and knowledge of the food-chain and seafood safety methodology.

Examples are:

- The etiology, transmission, treatment and control of aquatic zoonotic diseases
- Benefits and disadvantages of aquatic animals in public health
- Food-chain practices and legislation pertinent to their locality (including methods used to ensure product safety from the source to the consumer).

- Legislation, Regulations, and Policies

Candidate should demonstrate a good understanding of the laws, regulations and policies that directly impact the practice of aquatic veterinary medicine in areas relevant to the candidate.

Examples are:

- International bodies and guidance, codes or standards that address aquatic animal health and welfare, public health and seafood safety
- National and state/provincial/local governmental authorities responsible for, and statutory and non-statutory legislation, regulations and/or policies
- National and state/provincial/local veterinary organizations, their policies and codes or principles of veterinary medical ethics

- Development of a regional, national, or international health plan that includes list of reportable diseases, certification, zoning, risk assessment, and quarantine.

- Principles of Aquatic Animal Welfare

Candidate should demonstrate knowledge of current issues related to aquatic animal welfare and an ability to assess the welfare status of key aquatic species.

Examples are:

- General topics in aquatic animal welfare that are of concern to aquaculture industry, ornamental industry and hobbyists, research, resource management, zoos and aquariums
- Key legislation, regulations, policies, and professional societies' statements about aquatic animal welfare.
- Humane handling and euthanasia methods of aquatic animal species associated with the fishing industry, wildlife, aquaculture, ornamental trade, zoos, public aquaria and research.

Technical experience

- The AAH specialist should have had extensive practical experience with a wide variety of aquatic species
- The AAH specialist must be competent in the various skills associated with the field including history taking, catching and handling animals and clinical examination of individual organisms and group of animals, blood sampling, vaccination and education methods (including tube-feeding) and in addition anaesthetic and surgical procedures.

These specifications are representative and are to be adapted as necessary by the executive Committee of the College of AAH to recent developments.

III. Residency Training program description:

Requirements for entry into a Program :

To be accepted as a Resident by ECAAH, the following requirements must be fulfilled. An Applicant for registration as an ECAAH resident must:

- have graduated from a college of veterinary medicine from a EAEVE approved School and be legally able to practice veterinary medicine and surgery in a European country, unless relieved of this obligation by the Executive Committee;
- have completed a first period of at least one (1) year of internship in a wide area of veterinary activity associated with aquatic medicine or general veterinary practice, or its equivalent including relative post graduate qualifications (MSc, PhD), as defined by the ECAAH Education Committee.
- be accepted into an approved Residency Training Program (standard or alternative);
- review the Residency Program criteria and verify their ability to comply with all requirements;
- be registered by their Program Director with the ECAAH Secretary prior to, or no later than one month after, the official start of their standard training program.

Applicants may apply directly to a Residency Training Program that has already been approved or may approach a suitable Program Director and work with them to create a Residency Training Plan that is achievable by both Program Director and Applicant. No Applicant can be accepted as a Resident until their program is approved.

The three critical components of a Residency Training Program are:

A. A Program Director who must be an ECAAH Diplomate and who is responsible for identifying appropriate mentorship for each Resident;

B. A Residency Training Plan specifying how the requirements listed in this document are to be met;

C. A Residency Training Facility as required to fulfill the requirements listed in this document.

A. Program Director and Participation of Diplomates of the European College of AAH Residency Program

A Program Director must be an ECAAH Diplomate in good standing with the ECAAH for the duration of a Resident's training. The Program Director is responsible for the administration and continuity of the program and is responsible for oversight of all aspects of the Residency Training Programme, including:

- designing and implementing the Residency Training Plan;

- coordinating all clinical and educational aspects of the Residency Training Program;
- ensuring timely completion of administrative tasks and for all communication with the ECAAH;
- communicating and giving feedback to the Resident regularly to support him/her in making adequate progress in the program for example by reviewing the Resident's Experience and Skills Log and reviewing and critiquing Training Benchmark assignments with the Resident.

Program Directors must be legally authorized and permitted by the Residency Training Facility to practice in the facility where supervision will take place. A Program Director must be available to the Resident on a continual basis and is ultimately responsible for the quality of the clinical and educational functions of the Residency. This includes the quality of supervision by other Diplomates within the Residency Training Plan.

An ECAAH Diplomate may be Program Director for a maximum of three (3) Residents at any time. This does *not* include Candidates who have completed their Residency Training Programme but have not yet achieved Diplomate status and are continuing working with a Program Director until they sit the Certifying Examination.

Program Directors may apply for approval of standard programs prior to identifying the Resident who will undertake them or may choose to work with an Applicant (intended Resident) to develop a plan for an alternative track residency that is unique to that individual. The ECAAH reserves the right to withdraw Program Director privileges from any Diplomate who, upon review and request for corrective action, continues to fail to meet these requirements.

Participation of Diplomates of the European College of AAH Residency Program:

1. Each Program, must be supervised by at least one (1) Diplomate.
2. One Diplomate may train up to three (3) residents concurrently.
3. Director of the AAH Residency Program

Program Director: the Program Director shall be responsible for the administration and continuity of the Program and the Program Director must be a Diplomate.

4. Daily supervision is required, although it does permit the intermittent absence of the supervising Diplomate or the resident for vacations, meetings, days off, etc. Supervision must include consultations, case discussions, and case management with actual cases. Daily supervision is not necessarily performed by the Program Director – it may be performed by an ECAAH diplomate.

B. Specific Residency Training Plan description

The Residency training will be composed of:

(1) Broad orientation in cultured and held in captivity AAH / medicine.

- This can be realized through

100 clinical weeks in AAH training under the supervision of an ECAAH Diplomate where training in aquatic animal clinical sciences in a recognized institution or a recognized diagnostic laboratory that provides a broad range of clinical or laboratory assignments in a variety of fields (microbiology, parasitology, histopathology, immunology, virology, molecular biology, genetics). This includes a 12-16 week training period in industry (pet and aquaculture is required) required during this period under the supervision of a Diplomate. It also includes 4-6 weeks on public aquatic establishment or industry under the direction of an ECAAH Diplomate.

This will develop further according to the supervising Diplomate's suggestions. AAH rotations facilitate the development of the knowledge, skill, and proficiency in aquatic animal medicine via exposure to a wide variety of aquatic diseases together with the guidance and collaboration of experienced specialists in AAH.

In addition the program includes:

- 20 weeks working in Specialities or research related to AAH (with supervision by a Diplomate of the respective College) in public health, food hygiene, pathology, epidemiology, pharmacology, anaesthesia, radiology, management of fish /aquatic animal farms, advanced fish production technology/husbandry)
- 24 weeks for independent study or practice, lectures and lab teaching, including attendance of conference attendance/Continuing Professional Development, and related seminars or post graduate work (Continuing education programs as the sole method of training will not meet the requirements of certification as a Diplomate).

It is expected that these weeks will allow the Resident to be exposed to relevant Knowledge and complete the Skills and Experience list. The resident is also expected to complete Training Benchmarks.

Graduate degree studies may be included in the Program; however, at least 60% of the time in that combined graduate degree residency program must be allocated to clinical / laboratory / practical case responsibility.

Supervision is defined as the Resident and Supervisor participating in clinical work in a Residency Training Facility in which both the Supervisor and the Resident are on duty and concurrently managing cases. The Supervisor must be licensed and authorized to practice in the facility where supervision takes place. The Diplomate need not personally examine each patient seen by the Resident, but must provide

frequent consultation, and in-depth case review of those cases which can contribute to the progress of the Resident's academic and clinical education. The Resident must have a significant role in case management as either primary clinician or consultant.

Independent Study or Practice is intended to give flexibility to the Program and allow the Program Director and Resident to ensure all aspects of AAH have been experienced during the Residency. Program Directors are responsible for designing this requirement to meet the needs of individual Residents and to complement the training and experience undertaken during the weeks. These weeks may be used for further supervised or independent (i.e. unsupervised) clinical work in AAH, focused study in specialised facets of AAH, development of independent thought, staff supervisory and teaching skills, participation in research, further elective rotations, human medical interactions, or completion of Residency Training Benchmarks.

Laboratory Teaching Sessions

1. Are expected to be organized, requiring advanced notification and preparation;
2. Must involve at least 2 participants;
3. Are intended to be hands-on, requiring a physical skill component;
4. Are expected to challenge the Resident to prepare by researching and practising in advance of the session.

Lectures

1. Are to be formal presentations requiring advance notification and preparation;
2. Typically include development of PowerPoint Presentations and/or handouts;
3. May not be a repeat of a lecture developed and presented by someone else;
4. Can include moderating a seminar, participating in problem-based learning courses or teaching in informal settings such as student rounds, hospital case rounds or lectures to lay audiences;
5. Challenge the Resident to prepare by researching and referencing the literature.

Documentation that the Resident has fulfilled the Teaching Requirements will include a signed statement from the Program Director. At their discretion, the Credentials Committee may request additional documentation including handouts, calendars and copies of presentations for clarification.

Residents are expected to make regular progress in completing these teaching requirements. The Annual Report should reflect this progress.

Training Benchmarks

Training Benchmarks are tasks assigned by the Education Committee designed to verify and reinforce the knowledge and/or skills of a Resident. Training Benchmarks ensure regular and continuous progress toward completion of the Training Program, preparation for examination, and provide Residents and Program Directors examples of the depth and breadth of information pertinent to our Specialty.

100 case logs related to AAH

2 essays/ tests with multi-part essay questions and multiple choice questions

2 publishable case reports.

Training Benchmark assignments will be sent to Residents and Program Directors on twice every year. The Resident must complete all assigned Training Benchmarks using the following procedures.

1. Initial completion of the assignment by the Resident.
2. Assessment by the Program Director with appropriate corrections and additions discussed with the Resident.
3. Correction by the Resident.
4. Review and discussion by the Program Director and the Resident.
5. Approval by the Program Director when the assignment is complete.
6. Completed Training Benchmark assignments and Program Director Certification Statements must be electronically submitted to the ECAAH Secretary. Completion is recorded by the Credentials Committee.

All Training Benchmark assignments must be completed to fulfil Training Requirements.

C. Knowledge Requirements

This component of the training requirements comprises a body of information that the Resident must assimilate. This information is, in part, detailed in the list of Required Reference Materials established annually by the Education Committee. All Residents are responsible for learning the material in the most current list of required material. Residency Training Facilities must provide the majority of the reference materials specified by the Education Committee on site and must maintain this library based on the annual updates. Training Facilities are also required to provide computer access to the common veterinary and human medical databases.

D. Skills and Experience Requirements

The Education committee will publish annually an updated list of required skills and experiences. It is up to the Resident with the support of their Program Director to ensure that all Skills and Experience Requirements are met within the term of the Residency. A signed Program Director Statement confirming that the Resident has met the Skills and Experience Requirements is to be included in the Credentials Application. Case logs describing completion of Skills and Experience Requirements are strongly recommended. If a Residency Training Facility does not have the caseload to meet a certain requirement, it is expected that this will be highlighted in the Residency Training Plan with an alternative route to develop that skill (e.g. use of independent practice weeks at supervised time at another Residency Training Facility) clearly described and approved by the Education Committee in advance.

Skills include clinical procedures or other aspects of patient management that are critical to the practice of AAH medicine. These skills are to be taught to the Resident

through discussion and demonstration by a Supervisor. During the Residency, the Resident must learn each skill and the Program Director/Supervisor must be confident that the Resident can perform this skill at or above a minimum level of competency. The Education Committee may designate that certain skills can be taught with cadavers, models or other methods that do not require the use of hospital patients.

Experience includes observation and participation in specific clinical problems, procedures, or cases. Direct hands-on participation (rather than simple observation) is expected whenever possible.

E. Resident responsibilities:

The degree of responsibility assumed by the Resident shall be appropriate to the nature of AA medical procedure and training experience. The Resident on an AAH service shall be responsible for:

- a) Receiving data and history from clients
- b) Supervising daily management of laboratory kept animals.
- c) Participation in clinical /laboratory teaching
- d) Providing optimal clinical service and prompt professional communications.

While a minimum case load is necessary to develop clinical experience, the candidate must also be provided with sufficient time to evaluate patients properly, to study, and to participate in rounds, workshops, work with other Board Certified Specialists and to lecture.

F. Residency Training Facility

AAH facilities:

The supervised weeks of an AAH Residency Training Program must take place at an approved Residency Training Facility. Residency Training Facilities need to fulfil minimal standards as described in Appendix 1. A Residency Training Plan may include weeks at more than one Residency Training Facility. Experience of more than one clinical environment and more than one Supervisor may be beneficial in a Resident's development. The Program Director is responsible for ensuring the Residency Training Plan and the Facilities it utilises are structured for the benefit of the Resident.

The case load of the institution must be large enough to afford the candidate adequate exposure to all required phases of practice of the specialty. The minimum acceptable

number of accessions will depend upon the difficulty of the problem and the extent of treatment provided, but should consist of at least 3 cases per week. Aquaculture site visits/consultations should be a part of the caseload.

AAH examination rooms: the aquatic examination rooms must be designed, constructed, used, and maintained consistent with the current concepts of AAH practice. They must be sufficient in number and size to accommodate the case load. Units must have temperature control, water and air delivery system.

Anaesthetic equipment: appropriate anaesthetic equipment for aquatic animal use must be available.

Surgical instrumentation: a full complement of general and special instrumentation for diagnostic and surgical procedures, must be available.

Photography: photographic equipment for the documentation of any disease must be available.

Wet labs of recirculated or flow through systems must be available in a separate area supplied with adequate tanks/aquaria with suitable temperature control, water and air delivery systems. These must be licensed by a competent authority.

IV Application and Evaluation of Residencies

IV.1 Application for a new Residency Training Program

Applications for standard and alternative Residency Training Programs are due by March 1 (for programs starting in September) or September 1 (for programs starting in January). One signed paper copy and one complete electronic copy including signatures must be submitted to the ECAAH Secretary by those dates. Incomplete applications will not be evaluated and late applications may not be considered until the next evaluation cycle. The Education Committee will evaluate each Program Application and respond within 60 days of the submission deadline. The Education Committee will communicate any additional requirements for standard and alternative program approval to the Program Director.

All Residency Training Programs must be approved by the Education Committee before beginning Resident training. ECAAH Residencies must begin during the month of September (1-30) or during the month of January (1-31), unless otherwise approved by the Education Committee in writing. Residents can be accepted into a Residency Training Program once the program has been approved. Residents may also be accepted into existing ECAAH approved standard Residency Training Programs provided that any changes to the approved plan or facility are minor. The application must be completed by a Program Director who will be responsible for the program. The application must include

- detailed Residency Training Plan clearly documenting how the Residency Training Requirements will be met;

- a description of the Residency Training Facility(ies) where the Resident will undertake his/her supervised AAH time. These must attain the standards laid out in Appendix 1. Exemptions can be made by the Education Committee and ECAAH Executive Committee.

It is possible for a specific Program Director to train Residents under different Residency Training Plans; however, these are considered *different* Residency Training Programs each requiring separate application and approval by the Education Committee.

IV.2 Registration of a New Resident

Once an Applicant is accepted by an approved Residency Training Program, the Program Director must submit a completed 'Registration Form for Residents' along with the associated Resident Registration Fee. Applicants must fulfil the requirements for entering a program. Resident Registrations are due by September 1 (for programs starting in January) and May 1 (for programs beginning in September). Registration forms for Residents will be available on line and should be submitted through the ECAAH Secretary.

Within 30 days of an applicant's registration, the Education Committee will acknowledge the start of the new Resident, ask for further information, or refuse to approve the applicant as a new Resident with the reasons explained in writing. Applicants not accepted by the Education Committee may appeal the decision to the ECAAH Executive Committee. The Education Committee will notify the ECAAH Executive Committee and the Credentials Committee of all newly registered Residents.

IV.3. Annual Updates and Re-Approval

Approved Residency Training Programs (standard and alternative) are required to submit an Annual Update to the Education Committee. The Annual Update must list any deficiencies relating to the Residency Training Program or changes from the original Program Application. The Annual Update must also include changes that required immediate reporting that occurred during the preceding year.

In addition, Re-Approval of all standard Programs is required every 5 years. Annual Updates and Re-Approvals are due by September 1 (for programs starting in September) and Jan 1 (for programs starting in January). Forms will be available on line and should be submitted through the ECAAH Secretary.

IV.4. Changes to the Residency Training Program

The Program Director is responsible for immediately reporting any major changes in the Residency Training Program. These include:

- loss or change of a Program Director;

- significant changes to the Residency Training Plan;
- change to the location of the Training Facility(ies);
- changes to the standards of the pre-approved Training Facility(ies);
- any major interruption to the progress of a Resident.

The Education Committee must be notified as soon as any potential changes to the Residency Training Plan or Facility are identified. All changes to the Residency Training Plan must also be documented in the Annual Updates. A Residency Training Program may be placed on probationary status until the changes (and any proposed remedies) can be reviewed by the Education Committee. The Education Committee reserves the right to request reapplication for any Residency Training Program if changes are identified that might result in failure of the program to meet the minimum standards. Questions regarding the significance and implication of program changes should be directed to the Chair of the Education Committee

Chapter 4 Credentials

4.1 Annual Progress Reports

All Residents must submit an Annual Progress Report (note that these are distinct from the Annual Updates required for Residency Training Programs). Reporting periods for Annual Progress Reports are usually 52 weeks long but are occasionally 53 weeks to adjust for the calendar. The reporting period begins with the first Monday on or after January 1 (for programs beginning in January) and the first Monday on or after September 1 (for programs beginning in September).

All Annual Progress Reports must be submitted to the ECAAH Secretary. The deadlines for Annual Progress Report submission are March 1 (for programs beginning in January) and November 1 (for programs beginning in September). By these dates: all activities must be logged and the Program Director must have reviewed and sealed the Progress Report. Late submissions may not be evaluated until the next submission date and the Resident may be deemed inactive during that period (i.e., credit may not be granted for completed requirements).

Annual Progress Reports are evaluated by the Credentials Committee. Approval of each report and any recommendations and requirements are subsequently forwarded to the Resident and Program Director. Approval to submit a Final Credentials Application will be given when the Annual Progress Reports demonstrate the Resident is expected to have completed all components of their Residency Training Plan by the following September 1st.

4.2 Final Credentials Application

4.2.1 Application process

All candidates intending to submit their credentials for approval and/or to sit the qualifying examinations must send a form of Intention to submit Credentials or sit the Examinations) at any time but no later than January 1st of the year they wish the procedure to happen.

The Resident must submit his/her credentials to the Credentials Committee within 18 months of completion of the Residency. Credentials documenting completion of the residency training must be submitted even if the required publications have not been accepted and/or the Resident does not wish to take the examinations in that year. Exceptions to any of these rules must be requested in due time and following the appropriate procedure, as described in the relevant paragraph.

Those who fail to submit their credentials within the required time (18 months from the end of their residency) may be asked to provide further evidence of their continuing practice in aquatic animal health. The Credentials Committee may also require them to undergo further training before their credentials can be resubmitted.

The credentials deadline may be extended by one year at the discretion of the Credentials Committee if the resident can prove extenuating circumstances. If further extension is required the request should be made annually to the Credentials Committee.

It is the responsibility of the Resident to keep copies of all material submitted to, and correspondence with, the College. Such material may be required as evidence of completion of credentials. The ECAAH is not responsible for any material not received or not acknowledged. The responsibility for accuracy and availability of all required credentials rests with the applicant.

In case of credential refusal

If any of the submitted work is considered to be of inadequate standard, the applicant will not be allowed to proceed further with the examinations. The Chairperson of the Credentials and Education Committee will send unsuccessful applicants a notification letter, explaining the deficiencies in the credentials. A subsequent reapplication must include resubmission of the credentials found deficient, a written outline of the actions taken to correct these deficiencies, a new application form, updated curriculum vitae, pertinent correspondence, and any further application fee required. The application material must be presented as previously described.

All Residents must apply to the Credentials Committee for acceptance of their final Credentials and receive approval to sit the Certifying Examination. The credentials process consists of three main steps as outlined below.

To be eligible to submit a Credentials Application, a Resident must

1. have completed or be in the final stages of completing an ECAAH approved Residency Training Program and be up to date on all training requirements;
2. have received approval by the Credentials Committee to submit their Credentials Application in their most recent Annual Progress Report acknowledgement letter;
3. have submitted two manuscripts (one of which must be as first author) for publication in peer reviewed international journals.

The Credential Application Package must be submitted to the ECAAH Secretary on the form provided on the ECAAH College website; the Credentials Application Packet will include all instructions. The most current forms and instructions must be used for all submissions. One electronic copy of the completed application (*including signatures*) must be emailed to the ECAAH Secretary by March 1st of the year that the Resident intends to sit the Examination. The application fee and completed ECAAH Fee Remittance Form are due with the completed application.

Late, incomplete, or incorrectly formatted Credentials Applications will not be reviewed, and the Resident or Candidate will have to reapply the following year. Credential Application fees will not be refunded if the Resident or Candidate is determined ineligible to sit the Examination.

The Credentials Committee will review all Credentials Applications and respond with a status summary to Candidates by April 1. Each Credentials Application will either be denied with an explanation given, accepted as complete or accepted pending a list of requirements that must be completed and documented in the Final Progress Report submitted by July 1st (examination).

4.2.2 Final Progress Report

Following acceptance of their Credential Application Package, Residents who have not already done so must provide documentation that they have completed all outstanding Training Requirements by July 1 of the year in which they plan to sit the examination. One complete copy (*including signatures*) of the Final Progress Report must be received by the ECAAH Secretary by July 1. The documentation must include:

1. a copy of the Residency Completion Certificate;
2. Final Progress Report documenting completion of all Residency Training and Credentialing Requirements;
3. Proof that the required publications are accepted for publication (if not already provided with the Credentials Application)

Final eligibility rulings are made by the ECAAH Executive Committee upon recommendation by the Credentials Committee. Residents will be notified whether they are eligible to sit the examination no less than four (4) weeks before the scheduled examination dates.

4.2.3 Requirements for Manuscripts

ECAAH Residents must have had at least two (2) manuscripts (of which at least one as first (1) author) accepted for publication in a peer reviewed journal before they can

attain approval to sit the Certifying Examination. The topic of the articles should be relevant to AAH medicine and can be hypothesis-driven research, a prospective or retrospective study, a review article, or a case report. If a Resident is in any doubt about the suitability of an article or journal, they should contact the Chair of the Credentials Committee.

In order to be considered a journal must be international, double peer reviewed and have a well-defined review process in place. If the journal language is not English, the resident may be required to submit a certified translation of the article (at their own cost) to allow adequate review by the Credentials Committee. Manuscripts must be accepted for publication by July 1 of the year that the Candidate intends to sit the Certifying Examination. Residents and Candidates are strongly encouraged to submit manuscripts to journals for publication before November 1 of the year before expected examination. Delays in the review process are common and journals are under no obligation to fast-track submissions intended for credentialing purposes.

4.2.4 Re-Submission of Credentials

Individuals that have been denied permission to sit the Certifying Examination must reapply to the Credentials Committee to sit the examination the following year. The Credentials fee will need to be paid with re-submission of the Credentials Application Package.

For individuals reapplying, a complete Credentials Application Package must be submitted including: all correspondence from the Credentials Committee; documentation showing completion of all current Skills, Experience, and Training Benchmark Requirements; and a current signed Program Director Statement. Credentials Application Packages must be received by the ECAAH Secretary by January 15 of the year of intended examination.

The Credentials Committee will review all Credentials Reapplications and respond with a status summary to Candidates by April 1. Each Credentials Reapplication will either be denied with an explanation given, or accepted or accepted pending a list of requirements that must be completed and documented in the Final Progress Report. Final eligibility rulings are made by the ECAAH Executive Committee upon recommendation by the Credentials Committee. Residents and Candidates will be notified whether they are eligible to sit the Examination no less than four (4) weeks before the scheduled examination dates.

4.2.5 Appeal of Ineligibility to Sit the Certifying Examination

Residents and Candidates ruled ineligible to sit the Certifying Examination by the Credentials Committee may appeal the decision within 90 calendar days of the date of notification of their ineligibility.

- The appeal must be made in writing to the ECAAH Secretary and must include the grounds for reconsideration *and* be accompanied by all relevant documentation.
- Upon receipt, the ECAAH Secretary will notify the President of ECAAH
- The President will appoint an Appeal Committee within 30 days of notification.

- The complete application will be provided to the Appeal Committee for review and the Chair of the Credentials Committee will submit a written statement indicating the reasons for rejecting the application.
- The Appeal Committee will render its recommendation(s) to the ECAAH President within 60 calendar days of committee activation.
- The ECAAH Executive Committee will render a decision on the appeal and notify the petitioner of the decision within 15 calendar days of receiving the Appeal Committee's recommendation(s).
- If the affected party is not satisfied with the final decision, he/she may request mediation by the EBVS.

Chapter 5 Examination

Policy on Examination Procedures

1. Any examination candidate must have their veterinary degree at least 48 months prior to the final examination.
2. Before sitting an examination, the applicant's credentials must be evaluated by the credentials committee.
3. The examination must be held in the English language. Non-medical dictionaries and/or interpreters may be allowed.
4. Confidentiality must be maintained throughout the entire examination.
5. The examination may consist of written, oral and/or practical parts.
6. The parts of the examination may be taken separately and do not need to be taken all at the same time.
7. It must be made known to the candidates in advance in what way the different parts and levels will be evaluated.
8. Judgment must be incorporated into examinations-assessing not just what the candidates know but what they would do with that knowledge.
9. All parts of the examination must be held at all times under the direct supervision and physical presence of members of the Examination Committee or trained invigilators. In line with modern best practice, an invigilator must not be otherwise occupied during the examination and must not leave the room during the examination without another invigilator replacing him/her.
10. Candidates should be informed prior to the examination of the passing point, or, if this is not determined in advance, the method of setting the passing point.
11. Examination questions must be kept confidential by all Colleges, with the exceptions being the publication of model questions as a guideline to candidates, and during an appeal procedure, as outlined in a College's Bylaws and/or Policies and Procedures.
12. Candidates must be informed that they may apply to re-take all parts of the examination three times and that all parts of the examination must be passed within 8 years of completion of the residency programme.
13. The time between final credentials decisions and the examination date must be sufficient to permit consideration of possible appeals against a decision of denying acceptance of credentials.

The Certifying Examination is given once annually on dates that are announced by the ECAAH Secretary or the ECAAH Examination Committee Chair. The ECAAH Examination Committee is responsible for preparation and administration of the Examination and it is expected they will liaise closely with the ACAAH Examination Committee.

5.1 Application

Residents and Candidates that have received approval or provisional approval from the Credentials Committee and the ECAAH Executive Committee to sit the Certifying Examination must submit an ECAAH Fee Remittance Form accompanied by the appropriate payment. These must be received by the ECAAH Secretary by June 15 of the year of intended examination. The Examination Administration Fees will not be refunded if the Resident or Candidate is determined ineligible to take the Examination (e.g. failing to complete all credentialing requirements). The Fee Remittance Form will be available on line. Individuals approved to sit the Certifying Examination and who have submitted the Examination Administration Fee but who wish to defer examination must submit a deferment request in writing to the ECAAH Secretary at least 30 days prior to the examination. The request will be considered by the ECAAH Executive Committee.

5.2 Examination

Examinations will be normally in September. Candidates will be advised of any changes to the examination format no less than three months prior to examination. The Certifying Examination is divided into three (3) sections. Candidates may sit all three parts of the examination at one time or may choose to sit only one or two parts. If all three sections are attempted, candidates that fail a single section of the Examination need only re-sit that section. Candidates that fail two or more sections must re-sit the entire Examination. If only two parts are attempted, candidates must re-sit both parts if they fail one of the two parts.

Clinical Examination

This section of the examination tests case-based clinical problem solving. Short clinical vignettes are presented with additional clinical information that may include histopathology slides, radiographs, video clips, and laboratory results. Questions can be multiple choice, short answer, or short paragraph/essay in format and are designed to test clinical case management skills. This portion of the Examination is typically conducted on the first day of the Examination and is comprised of two (2) four (4) hour sessions (i.e. morning and afternoon).

General Multiple Choice Examination

This section of the examination includes questions covering (but not restricted to) the disciplines of anatomy, physiology, pathophysiology, pharmacology, microbiology, oncology, immunology, nutrition, and clinical aspects of the specialty. Knowledge

and interpretation of relevant seminal human papers may be tested. This portion of the examination is typically conducted on the morning of the second day of examination and is comprised of one (1) four (4) hour session.

Species Specific Multiple Choice Examination

This section of the examination covers topics from the current (last 5 years) literature and relevant textbooks. Some questions are purely knowledge based whereas others are designed to test problem solving and analysis of clinical information. This section of the examination is typically held on the afternoon of the second day of examination and is comprised of one (1) four (4) hour session.

Passing scores for each section are proposed by the Examination Committee and approved by the ECAAH Executive Committee. To pass the Certifying Examination, the minimum passing score must be achieved for each section. All Candidates sitting the Certifying Examination will be notified of their results within 45 days of the date of the Examination and on the same date.

Candidates who fail all or part of the Examination have 30 days after receiving e-mail notification of their results to request written clarification from the ECAAH Secretary. Clarification of Candidate's deficiencies will be provided within 60 days of receipt of the request.

5.3 Reapplication to Sit the Certifying Examination

Failing Candidates must resubmit an ECAAH Fee Remittance Form along with the Examination Fee as outlined above by June 15 of the year they intend to retake the examination. Candidates that fail all or a portion of the Certifying Examination are encouraged to remain current in their training requirements (i.e., continue working with a Program Director, maintain current Knowledge requirements, complete any new Skills or Experience Requirements, and complete ongoing Training Benchmarks).

5.4 Appeal Following Failure of the Certifying Examination

Candidates that fail all or a section of the Certifying Examination may appeal this decision within 90 calendar days of receipt of the Examination Committee's letter of clarification.

- The appeal must be made in writing to the ECAAH Secretary and must include the grounds for reconsideration *and* be accompanied by any relevant documentation.
- Upon receipt, the ECAAH Secretary will notify the President of ECAAH who will appoint an Appeal Committee within 30 days of notification.
- The Chair of the Examination Committee will submit to the Appeal Committee a written statement explaining the examination process, the scores of the Credentialed Candidate, a complete list of scores of all Credentialed Candidates that sat the examination, and a statement describing the criteria used to determine pass marks.
- The Appeal Committee will determine if the Credentialed Candidate received due process and that the examination was written, administered, graded and the pass point determined fairly.

- The Appeal Committee will review the appeal and render its recommendation(s) to the ECAAH Executive Committee within 60 calendar days of Committee activation.
- The ECAAH Executive Committee will render a decision on the appeal and notify the petitioner of the decision within 15 calendar days of receiving the Appeal Committee's recommendation(s).
- If the affected party is not satisfied with the final decision, he/she may request mediation by the EBVS.

To ensure equal opportunities for all qualified persons, ECAAH complies with all EBVS recommendations relating to special accommodations. Credentialed candidates who would like to request special accommodation related to a disability should notify the ECAAH Secretary at the time of submission of the Examination fee.

Chapter 6 Re-certification process

Re-certification of Diplomates will be required every 5 years, with year one being the first calendar year following initial board certification. Active Diplomate status will only be granted to Diplomates that fulfil the Re-certification requirements.

Re-certification requirements in order to be registered as an active Diplomate of the ECAAH are

1. More than 60% of working time (i.e. > 24 hours a week) should be spent in activities directly related to AAH;
2. At least 100 Credit Points (CP) have to be documented in a 5 year period. Credit Points can be gained with continuing education, services to the College, publications and presentations, and by supervision of Residents (see credit point system below).

As is stated in the Policies section II, part A.14 of the EBVS, a standard procedure has to be established in which the prerequisites for re-certification of the Diplomates for membership of the College are described. This re-certification has to be done under the responsibility of the College.

This standard procedure will be performed according to a credit point system. In this credit point system the following items can be included (Appendix 9, P&P's EBVS):

1. Publications
2. Presentations at national congresses or Continuing Education
3. Presentations at international congresses
4. Attendance at national or international congresses
5. Online/distance learning
6. Preparing examination questions
7. Supervision of Residents
8. Membership of Board or College committees
9. Two letters of reference (Appendix 8)

For each item a maximum number of points can be given. A total minimum

amount of points has to be collected during a 5 year period.

The ECAAH Re-certification Committee shall provide the standardised form(s) and format for submission of the Diplomate's Re-certification Application. The form will be published on the ECAAH website and will be e-mailed by the ECAAH to active Diplomates due for re-certification in a given year. This form and all associated materials will be due to the Re-certification Committee by January 31 of the year of recertification.

If a Diplomate does not meet the required number of points, they can be given one year extra in which to achieve this. If they do not succeed, or if any Diplomate does not submit all the information necessary for completion of the Re-certification Process or if their application for Re-certification is rated as insufficient, they will be made a "non-practising Diplomate" by the ECAAH Executive Committee, and may only use the title of "Diplomate (non-practising)". A non-practising Diplomate who has had their active status removed in this way and is seeking to revert to practising Diplomate status needs to satisfy the Credentials Committee of the College. If during a 5 year re-certification period, a Diplomate wishes to be registered as non-practising for a period of time (for example due to parental leave or illness), then they may inform the Re-certification Committee. Periods of up to two years within any 5 year period will be allowable. Diplomates who voluntarily remove themselves from the Specialist Register in this way do not require approval by the Credentials Committee prior to reinstatement. Any period of voluntary removal in this way will then be automatically added to the 5 years allowable to complete Re-certification.

Chapter 7 Submissions, Deadlines and Glossary

7.1 Submissions

All mailed submissions should be made to the ECAAH Secretary.

7.2 Deadlines

The deadlines listed in this document are critical dates that ensure that the ECAAH can conduct its business in an efficient manner that is fair to all. All Residents, Candidates, Supervisors, Program Directors and any other persons interacting with the College in matters related to Residency Training should be familiar with the listed dates. All mailed submissions must be *postmarked on or before the deadline*.

Applications for residency: 1st March (begin at Sept) or 1st September (begin at January)

Registration: May or September

Program starts September or January

Credentials submission within 18 months of completion of the residency and by 1st March before examinations

Intention to submit credentials	31 December
Application to sit exams	16 June
Examination	September
Annual reports	November and March

7.3 Glossary

7.3.1 Applicant

An applicant is an individual who wishes to be accepted onto a standard or alternative track Residency Training program. An applicant must fulfil the requirements as laid out in Section 3.2 of this Guide if they are to be successful in becoming a Resident. They remain an Applicant until both they as an individual and their Program has been approved by the Education Committee.

7.3.2 Resident

Unless otherwise specified, use of the term ‘Resident’ in this document refers to both traditional Residents and Residents in an alternative track program. Residents are, by definition, Applicants that have been accepted into an approved Residency Training Program by a Program Director and have been approved by the ECAAH. The ECAAH reserves the right to withdraw Resident privileges from any Resident who, upon review and request for corrective action, continues to fail to meet the requirements outlined in this document.

A Resident is considered to be active if they are making satisfactory progress toward the completion of the Residency Requirements. To remain active a Resident must:

- complete at least 15 clinical weeks per year (except in their final year when fewer than 10 weeks might be required to fulfil requirements);
- maintain the most current Knowledge Requirements;
- maintain the most current Experience and Skills Requirements;
- complete all assigned Training Benchmarks with their Program Director;
- Submit Annual Progress Reports detailing the completion of requirements to the Credentials Committee (Annual Progress Reports must be approved by the Credentials Committee for a Resident to be considered active).

A Resident is considered to be inactive when, by choice or by action, they are not making satisfactory progress toward completion of Residency Requirements. A Resident may choose to be placed on inactive status by applying to and receiving approval from the Credentials Committee. Note that the Credentials Committee must also approve the restarting of the Resident’s program.

If it is determined that a Resident is not making satisfactory progress in the completion of their Requirements or if a Resident fails to meet deadlines or other reporting Requirements, the Credentials Committee can place that Resident on inactive status.

The length of time that a Resident can be inactive is limited by the requirement that a Residency must be completed and Credentials submitted for the Certifying Examination **within six (6) years** of beginning their Residency.

To be reinstated to active status, Residents must apply in writing to the Credentials Committee. The Credentials Committee will determine which requirements must be fulfilled for reinstatement. These will depend on the circumstances under which the Resident was placed on inactive status.

7.3.3 Candidate

A Candidate is a resident who has had their Credentials (including Final Progress Report) accepted by the Credentials Committee and is thus permitted to sit the next Examination. Individuals are then termed a Candidate until they have

- passed the Certifying Examination and;
- been granted Diplomate status by the ECAAH Executive Committee.

7.3.4 Program Director

A Program Director must be a Diplomate of the ECAAH and is the College's representative within a Residency Training Program. The Program Director has a fiduciary responsibility to represent the interests of the ECAAH within the Residency Training Program. Program Directors must be ECAAH Diplomates.

7.3.5 Supervisor

Each Resident must be assigned a Supervisor by the Residency Program Director prior to the start of the Residency Training Program. The Residency Program Director and Supervisor may be the same individual. The Supervisor must be an ECAAH Diplomate and must be a member in good standing with the ECAAH for the duration of a Resident's training. Resident Supervisors must be legally authorized and permitted by the Residency Training Facility to practice in the facility where supervision will take place.

The Supervisor must be available to the Resident on a continual basis and is responsible for the administration and evaluation of the specific Residency Programme Requirements for the Resident including:

- Regular communication with and feedback for the Resident including discussions of case management to support satisfactory clinical progress
- Meeting formally with the Resident twice yearly to assess progress. Written reports signed by both the Supervisor and the Resident should be kept for these meetings and made available to ECAAH if requested
- Ensuring that the Resident is making adequate progress in the programme

A Supervisor can have a maximum of three (3) Residents at any time. This does *not* include Candidates who have completed their Residency Training Programme but have not yet achieved Diplomate status and continue to work with their Mentor until they sit the Certifying Examination.

It is up to the Program Director and the Supervisors to ensure the quality of supervision for each Resident in training. The ECAAH reserves the right to establish and monitor standards for Supervisors and to review and report their performance and success in training, to place them on probation, and to withdraw their privileges if necessary.

7.3.7 Sponsor

The sponsor is the institution that supplies the finances, staff, facilities and organization that is necessary for the organization of a Residency Training Program

Appendix 1: Requirements for Residency Training Facilities

Staffing

During the specified hours of operation a licensed veterinarian should be on the premises at all times and sufficient staff must be available to provide expedient patient care. Staffing should be sufficient to allow processing multiple cases; There must be a mechanism to allow appropriate and timely consultation with other veterinary specialists as necessary.

Medical Records

A complete and thorough medical record on file for each case should be kept at the Residency Training Facility either electronically or on paper

The Medical record must include the following.

1. species identification
2. Presenting signs and History
3. Physical or necropsy examination
4. Diagnostic and laboratory tests / procedures and interpretation
5. Tentative diagnosis or rule-outs
6. All treatments including anaesthesia records and surgical procedures
7. Progress notes
8. Medications administered
9. Client instructions and other client communications including discharge forms
10. Client and referring veterinarian communications
11. All entries in the medical record should clearly identify the individual(s) responsible for administering care and entering data.

Continuing Education

Continuing education must be provided for all clinical staff and must allow both veterinary surgeons and nurses/technicians to comply with their national requirements for professional registration.

A system of ongoing, in-service training should be provided for veterinary surgeons and technical staff to assure teamwork and familiarity with current procedures and guidelines.

Library facilities

All facilities should maintain a library containing current textbooks and periodicals. Internet access is required.

Equipment and Operating Processes

Standard operating processes should be available for key procedures in all areas of training. They should also be available for anaesthesia, medical procedures, infection control, and general clinic maintenance/cleanliness. These processes should all be consistent with currently accepted practice and procedures for a veterinary aquatic animal practice facility and must also comply with any national or regional legislation. Residency Training Facilities should have procedures in-place to quickly obtain specialist consults and to refer cases as appropriate.

In the application for approval of a Residency Training Facility the number of staff (Diplomates of ECAAH and other Colleges, technicians) as well as number and type of case load must be described. There is no set caseload but the Program Director must be able to justify that the caseload is sufficient for the Resident to meet the Knowledge and Skills requirements and, if there are any deficiencies in type of case identified, must provide detail on how the Resident will be trained in this as part of the Residency Training Plan.

Application to register as ECAAH Training Centre

ECAAH Diplomates seeking full (standard approved centre) or partial

(satellite centre) approval of their institution to become a Resident training centre

must provide satisfactory evidence proving that they offer sufficient facilities and a

programme that fulfils the necessary criteria for approval as a training centre offering

a standard residency training program. The form ACR should be completed, signed

and returned (electronically as scanned PDF document) to the Secretary and the

Chairperson of the Credentials and Education Committees. It is important to state

clearly who is taking the roles of Centre supervisor, and Resident supervisor(s).

Approved training centres will enable the Residents to gain familiarity with

Aquatic animal health of a wide range of species.

In satellite training centres, training of Residents is limited to a smaller number of species (e.g. only small animals or horses or zoo animals) or to specific aspects of aquatic animal health .

Approval of a Satellite training centre applies only for the species mentioned in the form and does not allow running a

standard residency program. Residents on a standard residency program based elsewhere are allowed to visit Satellite training centres without seeking prior approval of the Credentials and Education Committee. In the event of Residents on an alternative program visiting that centre, approval is necessary prior to the visit by submission of the form AAP, but it will not be necessary to describe the facilities (as the Credentials and Education Committee will already have approved the centre's facilities).

Approval is granted for a five-year period, and re-approval is necessary every five years thereafter.

The Centre supervisor is responsible to the ECAA H for the smooth running of the Residency program (according to the content of the program itself, facilities, rotations, etc) in the Centre for which the approval is requested. He/she is responsible for sending the documents requested for approval/re-approval of the program to the ECAAH, and for communicating any modification of the program to the Chairperson of the Credentials and Education Committees.

A Centre supervisor must be a practising ECAAH Diplomate as approved by the Credentials and Education Committees.

The Supervisor is responsible for the Resident's program. He/she defines the details and structures, within the framework of the approved program, the program of the Resident(s), has an educational role, and provides supervision for research projects, case log and case reports. The supervisor is responsible for the official communication to the ECAAH regarding the Resident(s). He/she submits the form annually as well as the final recommendation letter.

A supervisor must be a practising ECAAH Diplomate.

The maximum number of Residents that can be trained at a time in a training centre is 2 per Diplomate.

Upon approval of the Credentials and Education Committees, the Executive Committee will consider the application at its next meeting, and if the proposed program is approved, the Centre will be designated as an Approved Training Centre to run Standard Residencies or, if applicable, a Satellite Training Centre to contribute to Residents' training in respect of some specific aspects of veterinary aquatic animal health.

Re-approval of ECAAH Training Centre

Re-approval of training centres and programs is necessary every five (5) years

Approval applies to the program at the named institution and as long as it is supervised by the named Centre supervisor. Any changes in the structure of the program or in Diplomates working at the institution must be notified as soon as they happen to the Secretary of the College and the Chairperson of the Credentials and Education Committees. The Approval of the program ceases immediately if the above-mentioned changes are not communicated to the College within a month of occurring.

Appendix 2: Skills and Experience Requirements

Each Program Director will be responsible for finding the means to help the Resident gain proficiency in each task, including allowing the Resident time away from their primary Residency Training Facility to achieve the experience and training elsewhere if necessary.

For the requirements listed below, the terms “perform”, “demonstrate the technique”, and “understand” are often used. “Perform” indicates that the skill has been performed by the Resident on a clinical case. “Demonstrate” indicates that the skill has been performed or simulated in a laboratory setting at least. “Understand” indicates that the skill has been discussed adequately, including indications, complications, and techniques. For any technique/skill that “perform” or “demonstrate” is required, “understand” would obviously be indicated as well. The

method used to simulate a “demonstrate” skill is at the discretion of the Program Director.

This list does not include numerical requirements. As such, there is no list for the Resident to maintain and submit for evaluation. However, the Resident and Program Director should submit a signed statement with each annual update indicating that progress towards completion of the Skills and Experience List is occurring. Upon submission of credentials, the Resident and Program Director will sign a statement indicating that completion of the Skills and Experience List has occurred.

This list should be evaluated by the Education Committee every 3 years to determine if new Skills should be added, or others removed.

I. Anatomy, Taxonomy, and Physiology

A. Understand and utilize clinically significant differences among aquatic species.

i. Anatomical

ii. Physiological

B. Apply knowledge of taxonomy and phylogeny, genetics.

II. Environmental

A. Evaluate and manage potential hazards and understand differential effects across taxonomic groups.

i. Biological

ii. Chemical

iii. Physical

B. Apply husbandry requirements relative to natural history /species.

C. Address environmental conditions in relation to animal health and welfare.

D. Manage life support systems for artificial environments.

i. Filtration

ii. Water chemistry

iii. Air quality

E. Describe and apply principles of hygiene and sanitation.

F. Understand the clinical impact of basic principles of ecology.

G. Understand the clinical impact of disease ecology.

H. Implement behavior and welfare management.

i. Appropriate social structures and natural behaviors

ii. Recognize and manage aberrant behaviors

iii. Environmental enrichment

iv. Operant conditioning

v. Ethical issues

vi. Objective criteria for euthanasia decisions

I. Apply principles of conservation medicine and One Health approaches.

J. Utilize basic epidemiological principles.

i. Terminology

ii. Disease surveillance

iii. Risk analysis

III. Preventive Medicine

- A. Describe and utilize principles of nutrition.
 - i. Dietary requirements and formulation
 - ii. Food handling and storage
 - iii. Food safety
- B. Develop and implement pest control programs.
- C. Develop and implement preventive medicine protocols.
 - i. Biosecurity
 - ii. Vaccination
 - iii. Parasite management
 - iv. Quarantine
 - v. Age- and taxon-specific
 - vi. Animal movements

IV. Restraint/ enclosures

- A. Demonstrate appropriate use of tranquilizers, sedatives, anesthetics, and other restraint agents.
 - i. Mechanisms and actions
 - ii. Administration and routes
 - iii. Clinical pharmacokinetics
- B. Demonstrate appropriate use of different types of restraint (e.g., behavioral, chemical, physical).
- C. Understand and manage the safety implications for humans, non target species, and the environment.
- D. Demonstrate appropriate use of capture and immobilization equipment.
- E. Manage patient risks involved with capture and anesthesia.
- F. Understand the principles of monitoring during restraint.
 - i. Clinical applications
 - ii. Interpretation
 - iii. Intervention
- G. Select appropriate methods for animal transport.

V. Medicine and Surgery

- A. Gather and evaluate case history.
- B. Perform physical examinations, necropsies and recognize abnormalities.
- C. Describe indications for surgery and demonstrate surgical techniques.
- D. Implement pre- and post-operative management plans.
- E. Identify the etiology and understand the pathophysiology of diseases.
- F. Select appropriate diagnostic and treatment modalities for diseases.
- G. Plan and assess medical case management.
- H. Identify and address public health issues regarding aquatic species.
- I. Apply principles of trauma and wound management.
- J. Select species-appropriate euthanasia techniques.
- K. Implement triage approaches.
- L. Create and prioritize a list of differential diagnoses from results of history, clinical examination, and diagnostic procedures.
- M. Understand and apply principles of pain management.
- N. Understand and apply the principles of reproductive management.

VI. Diagnostics

- A. Describe the principles and clinical applications of diagnostic modalities.
- B. Examine samples, interpret results of diagnostic tests, and understand their limitations.
- C. Select and obtain appropriate antemortem samples for examination and analysis.
- D. Demonstrate appropriate techniques for collection, handling, and storage of diagnostic samples.
- E. Plan a diagnostic approach to the investigation of individual animal or population-related disease.
- F. Conduct gross necropsy and recognize basic pathology.
- G. Select and obtain appropriate postmortem samples for examination and analysis.
- H. Recognize histopathologic findings and correlate with other diagnostic results.

VII. Biologics and Therapeutics

- A. Select and administer appropriate therapeutic agents considering:
 - i. Mechanisms of actions
 - ii. Effects and indications
 - iii. Clinical pharmacokinetics and pharmacodynamics
- B. Understand and manage hazards for animals, humans, and environmental exposure.
- C. Calculate volumes and concentrations needed for therapeutic administration.

VIII. Communication, Education, and Administration

- A. Explain and present information related to aquatic medicine to the Industry, public, media, policymakers, and other professionals.
- B. Train and supervise individuals with respect to aquatic species.
- C. Know international regulations as they relate to aquatic species and animal health (e.g., CITES, OIE).
- D. Understand terminology specific to aquatic species.
- E. Contribute to the development of policies and standard operating procedures related to animal management and public health and safety.
- F. Maintain accurate and comprehensive medical records.²⁸

IX. Research

- A. Advise in animal care and use research policy.
- B. Understand research methodologies and develop an appropriate study design.
- C. Apply basic principles of statistical analysis.
- D. Identify and critique appropriate and relevant scientific literature.