



## AUSTRALIAN AND NEW ZEALAND COLLEGE OF VETERINARY SCIENTISTS

### MEMBERSHIP GUIDELINES

#### *Avian Health (Caged and Aviary Birds)*

#### INTRODUCTION

These Membership Guidelines should be read in conjunction with the *Membership Candidate Handbook*.

#### ELIGIBILITY

Refer to the *Membership Candidate Handbook*.

#### OBJECTIVES

To demonstrate that the candidate has acquired a high level of knowledge and competence in the principles and application of the medicine and surgery of companion and aviary birds, and is able to give sound advice in this field to veterinary colleagues.

#### LEARNING OUTCOMES

These guidelines relate to the discipline of general avian medicine which includes veterinary care for companion, aviary and wild birds which are likely to be encountered in avian practice in Australia and New Zealand including:

- Native and exotic bird species which are kept as companion or aviary birds.
- Backyard, show and pet poultry, including waterfowl and game birds (but not commercial poultry)
- Pigeons (fancy and racing)
- Native wild birds of Australia and New Zealand
- Other species such as ratites (ostrich, emu, cassowary and kiwi) and other birds kept as zoological specimens

For these species:

1. The candidate will have a **sound**<sup>1</sup> level of knowledge, in commonly kept bird species, of:
  - 1.1. Anatomy and physiology, including knowledge of significant differences between genera and species where clinically relevant
  - 1.2. Taxonomy of birds
  - 1.3. Nutrition and husbandry described above (excluding wild birds, ratites and other birds kept as zoological specimens)
  - 1.4. The interaction between genetic, nutritional and environmental factors and pathogens in the development of disease
  - 1.5. The aetiology, pathogenesis, pathophysiology, and epidemiology of infectious and non infectious avian diseases.
  - 1.6. The diagnostic tests and procedures including, but not limited to, haematology, biochemistry, immunology, cytology, molecular diagnostics, histopathology, electrocardiology, endoscopy and diagnostic imaging (radiology and ultrasound) as these apply to the diagnosis of disease conditions in birds
  - 1.7. Treatment techniques for avian patients including, but not limited to:
    - 1.7.1. Supportive care and medication. This includes, but is not limited to, fluid supplementation, nutritional supplementation, optimal ambient temperature control for each species, species-specific hospitalisation and treatment requirements and practicalities of medication in different species and environments
    - 1.7.2. Pharmacology. This includes knowledge of the pharmacokinetics and the pharmacodynamics of drugs which are suitable for treatment and also the various methods of administration
    - 1.7.3. Anaesthesia and analgesia
    - 1.7.4. Surgery, both soft tissue and orthopaedic.
    - 1.7.5. Paediatric medicine
  - 1.8. Normal species appropriate behaviour, and how it relates to captivity.
  - 1.9. The principles and application of behavioural analysis and behavioural modification

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<sup>1</sup> **Knowledge Levels:**

**Detailed knowledge** - candidates must be able to demonstrate an in-depth knowledge of the topic including differing points of view and published literature. The highest level of knowledge.

**Sound knowledge** – candidate must know all of the principles of the topic including some of the finer detail, and be able to identify areas where opinions may diverge. A middle level of knowledge.

**Basic knowledge** – candidate must know the main points of the topic and the major literature.

2. The candidate will have a **basic**<sup>1</sup> level of knowledge of:
  - 2.1. The embryology of avian organ systems
  - 2.2. The principles of immunology as they apply to birds
  - 2.3. Advanced diagnostic techniques such as computer tomography (CT) and magnetic resonance imaging (MRI)
  - 2.4. Infectious diseases of birds currently exotic to Australia and New Zealand but which could be of potential significance or importance to avian health if introduced, including those of importance to poultry. This includes legislative responses to exotic disease incursion.
  - 2.5. The nutrition and husbandry of less commonly kept species (native wild birds, ratites and other birds kept as zoological specimens )
  - 2.6. Applied avicultural techniques such as genetic selection (including colour mutation, sex-linked genes and heritable diseases), artificial incubation, and the hand rearing of neonates.
  - 2.7. Biosecurity principles as they relate to the management of avian collections, either small or large.
  - 2.8. The measures to reduce the public health significance of those diseases of birds that are zoonotic
  - 2.9. The welfare and legislative issues relevant to the avian species and the provision of veterinary services
  - 2.10. Commercial poultry enterprises and problems

The candidate will **be expected to be competent** at practical skills associated with the discipline, including catching and handling, clinical examination, history taking, diagnostic sampling, surgery and necropsy of birds.

## EXAMINATIONS

For information on both the standard and format of the Written and Oral examinations, candidates are referred to the *Membership Candidates Handbook*. The Membership examination has **two separate, autonomous components**:

1. **Written Examination** (*Component 1*)  
**Written Paper 1** (two hours): Principles of the Subject  
**Written Paper 2** (two hours): Applied Aspects of the Subject
2. **Oral Examination** (*Component 2*)  
**Oral** (approximately one hour)

The written examination will comprise of two separate two-hour written papers taken on the same day. There will be an additional 15 minutes perusal time for each paper, during which no writing in an answer booklet is permitted. In each paper you are provided with four (4) questions to answer, worth 30 marks each, giving a total of 120 marks per paper. There is no choice of questions. Questions may be long essay type or a series of shorter answer sub-questions. Marks allocated to each question and to each subsection of questions will be clearly indicated on the written paper.

### **Written Paper 1:**

This paper is designed to test the Candidate's knowledge of the principles of avian medicine and surgery of companion and aviary birds, as described in the Learning Outcomes. Answers may cite specific examples where general principles apply, but should primarily address the theoretical basis underlying each example.

### **Written Paper 2:**

This paper is designed to (a) test the Candidate's ability to apply the principles of medicine and surgery of companion and aviary birds to particular cases/problems or tasks and (b) test the Candidate's familiarity with the current practices and current issues that arise from activities within the discipline of medicine and surgery of companion and aviary birds in Australia and New Zealand.

### **Oral Examination:**

This examination requires the candidate to demonstrate achievement of the above-mentioned Learning Outcomes. The duration of this examination is approximately (1) hour. This will be conducted as a power point presentation, but radiographs, typed blood results or other physical aids may be used. A set number of questions which will be between five (5) and ten (10) cases are presented with supporting questions asked verbally in a face-to-face setting. The oral examination has a total of 100 marks.

## RECOMMENDED READING MATERIAL

The candidate is expected to read widely within the discipline, paying particular attention to areas not part of their normal work experiences. This list of books and journals is intended to guide the candidate to some core references and other source material. Candidates also should be guided by their mentors. *The list is not exhaustive and is not intended as an indicator of the content of the examination.*

### Core textbooks

- *A Colour Atlas of Avian Anatomy.* J McLelland, WB Saunders Co Philadelphia, 1991
- *Atlas of Clinical Avian Hematology,* Clarke, Boardman and Raidal, Wiley-Blackwell 2009
- *Avian Medicine: Principles and Application* Harrison, Ritchie & Harrison Eds, Wingers Publishing, Lake Worth, FL, 1993
- *Avian Medicine and Surgery.* RA Altman, SL Clubb, GM Dorrestein, K Quesenberry. WB Saunders 1997
- *Avian medicine and surgery in practice: companion and aviary birds.* B. Doneley. Manson Publishing 2012
- *Avian Viruses Function and Control.* B Ritchie, Wingers Publishing, 1995.
- *Clinical Avian Medicine* Harrison GJ & Lightfoot, TL (eds). Spix Publications, Palm Beach, Florida 2005. Vol 1 & 2
- *Laboratory Medicine, Avian and Exotic Pets* A Fudge, WB Saunders, Philadelphia, 2000
- *Pathology of Pet and Aviary Birds* Schmidt, Phalen et al. Iowa State Uni Press.
- *Radiology of birds: an atlas of normal anatomy and positioning.* S. Silverman and L A Tell. Saunders Elsevier 2010

### Non-Core Textbooks

- *Avian Surgical Anatomy* SE Orosz et al, WB Saunders Co Philadelphia, 1992
- *Birds, their Structure and Function* AS King, J McLelland, 2nd Ed Balliere Tindal, London, 1984 (out of print)
- *Comparative Avian Haematology* CM Hawkey, TB Dennett. Iowa State Univ Press, Ames, 1989
- *Exotic Animal Medicine: Review and Test.* J. Samour (ed) Saunders Elsevier 2012

- *Psittacine Aviculture* R Schubot et al Avicultural Breeding and Research Center, Loxahatchee, FL, 1992
- *Self-Assessment Colour Review of Avian Medicine*. Altman RB & Forbes NA. Manson Publishing (1998)

## **Journals**

Relevant subject material in listed journals is examinable.

### **Core journals**

- Australian Veterinary Journal
- Avian Diseases
- Avian Pathology
- Journal of Avian Medicine and Surgery
- New Zealand Veterinary Journal
- The Veterinary Clinics of North America; Exotic Animal Practice
- Association of Avian Veterinarians Annual Proceedings – American Proceedings
- Association of Avian Veterinarians - Australian Committee Annual Proceedings
- Association of Avian Veterinarians - European Committee Annual Proceedings
- Post Graduate Foundation of the University of Sydney - Avian Proceedings
- Journal of Exotic Pet Medicine/Seminars in Avian and Exotic Pet Medicine

### **Non-core journals**

- Journal American Animal Hospital Association
- American Journal of Veterinary Research
- Australian Veterinary Practitioner
- Compendium of Small Animal Practice
- Journal of Small Animal Practice
- Journal of the American Veterinary Medical Association
- Journal of Wildlife Diseases
- Journal of Zoo and Wildlife Medicine
- Veterinary Record

## **On-Line resources**

- Veterinary Information Network [www.vin.com](http://www.vin.com)
- Birdmed

## **FURTHER INFORMATION**

For further information contact the College Office

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