

Virtual Lecture & Wet Lab [20 CE Units] Ophthalmic Imaging and ERG in Animals: Investigating Retinal Structure and Function

Presented by:

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Precision Ophthalmic Devices

February 12th and 13th, 2021

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Research & Training Facility

**12 Sunset Way Suite 218 Bldg. B,
Henderson, Nevada 89014**

Speakers

Gillian McLellan BVMS, PhD

Associate Professor of
Comparative Ophthalmology at
University of Wisconsin-Madison

Ron Ofri DVM, PhD

Professor, Veterinary Ophthalmology
Hebrew University of Jerusalem

Overview

Join us for a virtual exciting course focused on imaging and ERG animal ophthalmology. This event is recommended for those working in the fields of veterinary ophthalmology or vision research, who are interested in electroretinography and the latest technologies for in vivo retinal imaging. You will expand your knowledge on the application and interpretation of retinal function and structure in animal models and diseases.

Due to Covid-19, our in person attendance has been cancelled.

Day 1 will consist of morning lectures, followed by two afternoon wet labs demonstrating ERG and imaging in rodents.

Day 2 will begin with morning lectures on combining retinal structure and function data into significant results. The afternoon hands-on, in vivo ERG and imaging wet labs will cover several animal species.

Attendees will observe and have the opportunity to experience and observe hands-on practice with multiple species in our state of the art teaching facility.

Virtual Course Fee \$750

- 2 days with 20 hours of lectures and wet labs
- Printed Course materials will be shipped to participants in advance
- Contact us about group rates

Topics

- Anatomy & Physiology – Understanding Cellular Structure and Response to Light
- What's in an ERG Waveform?
- Evoking a Response – Different Methods and Results
- Light, Sound, and Other Methods of Retinal Imaging
- In Vivo Imaging vs. Histology as of Today
- Troubleshooting and Getting Good Results
- How to Record an ERG: Equipment and Patient Preparation
- Multi-Species In Vivo ERG and Retinal Imaging Examinations

About the Speakers

Dr. Gill McLellan has spent her career working to advance comparative ophthalmology & visual sciences. Her current research focus is comparative glaucomatology encompassing imaging of the retina and optic nerve, electrophysiology, aqueous humor dynamics, genetics and pathology of glaucoma in animals and humans. Dr. McLellan also has a strong research interest in comparative ophthalmic pathology. She will share her knowledge of ophthalmic imaging and electrophysiology in research, including applications of OCT, confocal laser scanning ophthalmoscopy, flash, pattern, and multifocal ERG to better understand retinal and visual pathway structure and function.

Dr. Ron Ofri has been studying visual physiology for over 20 years, focusing on retinal electrophysiology and changes in visual function resulting from glaucoma and other diseases. Dr. Ofri is a very popular speaker, having been invited to speak in more than 35 countries. He has lectured at national and world congresses for general practitioners, as well as advanced courses for veterinary ophthalmologists. His research focuses on developing novel treatments for blinding retinal diseases, with his recent work on gene therapy in a sheep model of day blindness paving the way to clinical trials in human achromatopsia patients. To date, Ron has authored 3 textbooks, a score of textbook chapters and more than 90 referred papers.

AAVSB RACE Program Approved
909-38011 20 hours maximum CE hours

This program 909-38011 has been approved for 20 hours of continuing education credit in jurisdictions that recognize RACE approval.

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Ophthalmic Imaging and ERG in Animal Research: Investigating Retinal Structure and Function Lecture & Wet Lab

Program Agenda:

DAY 1 – Friday, February 12th

Welcome, Introduction of speakers (OcuScience)

Where does the ERG come from? The anatomical and physiological generators of signal (Speaker Ofri)

What do I need to record an ERG? Patient preparation, equipment, and settings (Speaker Ofri)

ERG protocols and factors that could affect my recordings (Speaker Ofri)

Ophthalmic Research Imaging (Speaker McLellan) – A review of imaging modalities

Maximizing Quality of Ophthalmic Imaging Data in Animal Subjects – How to improve data (Speaker McLellan)

Wet Lab – Mouse Fundus Imaging (OcuScience)

Wet Lab – Mouse OCT Imaging (OcuScience)

Wet Lab – Large Animal Fundus and OCT Imaging (OcuScience)

DAY 2 – Saturday, February 13th

Moving to Flat Mount Data without the Flat Mount/Global to Molecular View of the Eye (Speaker McLellan) - Ex-vivo vs. in-vivo imaging
Benefits and Limitations of Optical Coherence Tomography and other Wizardry (Speaker McLellan)

Overcoming limitations of the flash ERG. Trouble shooting noise and other problems; using alternative electrophysiological modalities
(Speaker Ofri)

Interpreting ERG's (Speaker Ofri) - What does the data mean?

Structure-Function correlations: Seeing the Big Picture (Speaker McLellan)

Wet Lab – Demo Rodent ERG (OcuScience)

Data Analysis using the ERGVIEW program (OcuScience)

Wet Lab – Large Animal ERG (OcuScience)

Final Thoughts/Closing Remarks – Provide a synopsis of the program lectures and allow for questions. (OcuScience)