



Epi in the Valley

18-22 March 2019,

Yarra Valley, Victoria

Supported by the OIE Collaborating Centre for Diagnostic Test Validation Science in the Asia-Pacific Region

DIAGNOSTIC TESTS: FROM ZERO TO HERO

This 3rd workshop in the series, follows the successful formula of *Epi in the Vineyard & Epi in the Garden City* held in South Australia in 2017 and Queensland in 2018 – i.e. to learn about statistics and epidemiology study in an inspiring location away from the hustle and buzzle of major cities. In 2019, **Ian Gardner** will lead the teaching on one of his favourite topics, Diagnostic Test Evaluation, in a beautiful location tucked away in the hills above the Yarra Valley wine region, near Melbourne.

The topic: Diagnostic Tests From Zero to Hero

The focus of this workshop will be on the interpretation and validation of diagnostic tests in veterinary science. We will provide detailed coverage of validation alternatives in the absence of a perfect reference (gold) standard, moving from basic principles of test validation and interpretation to latent class analysis, including application to prevalence estimation.

Over the 5 days, the course will cover accuracy and precision as they relate to diagnostic tests, estimation of diagnostic sensitivity and specificity (and their confidence intervals), determining the sample size to estimate sensitivity and specificity for confidence intervals of predefined width, predictive values and the factors that influence them, interpretation of multiple test results in series or parallel, the impact of correlated test results, how to select an appropriate cut-off for declaring a test result positive, and the principles for estimating sensitivity and

specificity when no perfect reference (gold) standard exists.

The course will cater for all levels of epidemiological background. Those less familiar with the content area will be gently introduced and show a suite of online tools to make their life easier. More advanced participants can expect to leave the course with a toolbox of code in OpenBUGs and for those familiar with R (not essential) code will be provided to implement reproducible analyses using R2OpenBUGS and similar. On the final day, participants will be given the opportunity (strictly voluntary) to present their data and analyses to the class for discussion purposes and work with workshop facilitators on their datasets.

The primary software used in the instruction will be Medcalc (trial version available), OpenBUGs and R driven by RStudio.

The venue: Christmas Hills Hall

787 Ridge Road, Christmas Hills
<https://christmashillshall.org.au/>

8am-3.30pm (teaching)
3.30pm onwards (tours and networking)

Registration and fees:

To register, [visit the event website](#). The registration fee includes e-notes, tea breaks and lunches.

Graduate student* AUD \$950
Non-student AUD \$1,250

*50% rebate for the 2nd graduate student if registered before January 31st, 2019.

'A DELICATE BLEND OF NUMBERS AND SCENERY'

Ancillary activities:

Planned afternoon activities will include:

- Visiting Mount Mary Vineyard (<https://www.mountmary.com.au/>)
- A behind the scenes tour of the vet clinic at Zoos Victoria's Healesville Sanctuary (<https://www.zoo.org.au/healesville>)
- A bushwalk through the hills
- A BBQ and a spot of tennis at the venue
- Workshop dinner at Yarra Glen Hotel



Ian's Bio

Ian is a professor of epidemiology at The University of Prince Edward Island's Atlantic Veterinary College (Canada). Ian has been at the forefront of diagnostic test validation science for decades, playing a leading role in the writing of the OIE guidelines on the principles of validation, is an author on many of the seminar papers that advanced diagnostic test evaluation in the absence of gold standards, and in 2017 Ian was awarded the Calvin W. Schwabe Award for lifetime achievement in veterinary epidemiology and preventive medicine.

Practical information

The venue is near Yarra Glen around 1 hour's drive from Melbourne Airport. For more information about this course, please contact

simon.firestone@unimelb.edu.au