



PARASITOLOGY

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New Zealand Society for Parasitology June 2019 Newsletter

Greetings NZSP members

I hope this newsletter finds you all well and looking forward to our next conference in sunny Dunedin! Victoria Chapman, Paul Mason, Robert Poulin and Richard Sides are on the case and our dates are locked in for Wednesday 23rd and Thursday 24th October 2019, held at the Dunedin Centre which is part of the Town Hall. The Parasite Advisory Day (PAD) will be held on Tuesday 22nd October at Invermay. (Mon 21st is Labour Day FYI). Veterinary themed presentations will be grouped for the Wednesday so if you are veterinary staff travelling down and have limited time the Tuesday/Wednesday will be of most value to you. Registration forms for the conference will be distributed as soon as they are available. Conference dinner will be in the White Room @ Vault 21 on the Wednesday night. The committee have obtained a special room rate at Wains Hotel for the conference, just tell them you are attending the NZSP conference. Website is <http://www.cpg-hotels.com/our-hotels/wains-hotel-dunedin/> or call them on (03) 477 1145.

Call for abstracts: Please get your conference abstracts in to Paul Mason masonp@earthlight.co.nz. Please also email cathryn.c@vetora.nz if you have any suitable content for our newsletter/website at any point throughout the year. If I don't receive some voluntary input I will do a Victoria and start tapping shoulders!

Website: Many thanks to Olivia MacPherson for all her hard work on our website over the last couple of years. I will be taking over the day to day running of it so bear with me, I'm just waiting for the details I need and then we will have updated conference proceedings, details etc.

Martin Neilsen has finished his time here in NZ with AgResearch and I've been following him on Twitter to see what he is up to. This has led to finding lots of interesting posts on parasitology from around the world so I'm going to list some below if you are interested. A lot is equine related but not all and it's all interesting reading:

'Systematic review of gastrointestinal nematodes of horses from Australia' <https://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-019-3445-4>

'Field evaluation of Duddingtonia flagrans IAH 1297 for the reduction of worm burden in grazing animals: Pasture larval studies in horses, cattle and goats – ScienceDirect' <https://www.sciencedirect.com/science/article/pii/S0304401718302577>

'Worms Frozen for 42,000 Years in Siberian Permafrost Wiggle to Life' <https://www.livescience.com/63187-siberian-permafrost-worms-revive.html>

'Praziquantel Resistance in the Zoonotic Cestode Dipylidium caninum | The American Journal of Tropical Medicine and Hygiene' <https://www.ajtmh.org/content/journals/10.4269/ajtmh.18-0533>

'Anthelmintic efficacy of single active and combination products against commonly occurring parasites in foals' <https://www.sciencedirect.com/science/article/pii/S0304401719300482>

'The effect of climate, season, and treatment intensity on anthelmintic resistance in cyathostomins: A modelling exercise – ScienceDirect' <https://www.sciencedirect.com/science/article/pii/S0304401719300755>

‘Computer model paints a 40-year picture of future worm resistance in horses - Horsetalk.co.nz’ <https://www.horsetalk.co.nz/2019/04/20/computer-model-worm-resistance-horses/>

‘Modelling the development of anthelmintic resistance in cyathostomin parasites: The importance of genetic and fitness parameters – ScienceDirect’ <https://www.sciencedirect.com/science/article/pii/S03044401719300810>

‘Systematic review of gastrointestinal nematodes of horses from Australia | Parasites & Vectors | Full Text’ <https://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-019-3445-4>

Thanks to David Seifert for putting the newsletter together for us – much appreciated!

See you all in Dunedin.

Cathryn

“Golden death” kills parasites from inside out

This recent BBC news headline attracted my interest & a google search took me the following Pub Med article.

“The golden death bacillus *Chryseobacterium nematophagum* is a novel matrix digesting pathogen of nematodes” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6394051/>

Described is initial work with *C.elegans* followed by work with livestock nematodes. All free-living (L1-L3) stages of all nematodes tested were killed including *H. contortus*, *T. vitrinus*, *T. circumcincta* & *O. oestertagia*. The text below explains the graph & photos of the bacteria destroying *C. elegans*. The challenge will be the delivery mechanism!

Time-course of *C. elegans* killing by *C. nematophagum*. **a** Timecourse of 241 L1 *C. elegans* survival (% alive) in the presence of OP50 (red), compared to 193 L1 *C. elegans* in the presence of *C. nematophagum* (blue). **b** *C. elegans* mixed population exposed to *Chryseobacterium gallinarum* for 48 h (× 40). **c** *C. elegans* mixed population exposed to *C. nematophagum* for 48 h, dead bacteria filled carcasses arrowed (× 40) **d** *C. elegans* L1 cultured in OP50 for 48 h (× 640); small arrow denotes anterior pharyngeal bulb and large arrow the posterior pharyngeal bulb. **e** *C. elegans* L1 cultured for 48 h with *C. nematophagum*, only structureless bacterial-filled carcass (star) remains (× 640)



