



CONNOVATION RESEARCH - Quarterly Report April 2009

HIGHLIGHTS AND ACHIEVEMENTS: -

1. A record quarter for new product registration achievements with significant advances made in the registration of microencapsulated zinc phosphide (MZP), Feratox®, and para-minopropiophenone (PAPP). Interaction with ERMA & NZFSA and completion of registration dossiers have advanced such that in April/May we will - i) have MZP advance from "pre-screen" at ERMA to full formal assessment ii) submit PAPP dossiers for "pre-screen" to ERMA iii) Submit Feratox® dossiers for pre-screening for NZFSA to extend the possum registration to include dama wallabies as a 2nd target species iv) substantially complete dossiers for APVMA registration to support Feratox® export and use in Tasmania for humane culling of over abundant possums and wallabies in Forestry plantations..
2. Eight reports/publications were completed as well as solid progress in new product research and field work.
3. Connovation Ltd in partnership with Crown Research Institute "Plant and Food" has been awarded a grant from the Department of Primary Industry and Water, Tasmania. Our focus is to develop new technology to protect young trees from browsing damage. The research tender entitled "Smelly socks" aims to deliver biodegradable plastic mesh incorporating repellents.
4. On the back of a kill rate of approximately 90% of a population of radio collared dama wallabies reports have been completed and registration dossiers prepared to extend the current Feratox® registration.
5. Data from field trials on possum specific bait called 215 have been collated for an AHB report.
6. Testing of low dose cholecalciferol formulations for safer control of rodents and possums has continued. A report for AHB has been completed in March. The effectiveness of a low dose cholecalciferol paste bait containing 0.4% cholecalciferol against captive possums has been assessed. A dosage of 15 gm has been shown to be an effective dose with an 89.5 % kill in captive possums that ate bait, with an overall time to death similar to that of the existing 0.8% formulation of 7 days. Field trials are being planned.
7. We contributed to an new Lincoln University our new FRST bid, entitled "Pest Control for the 21st Century" and also to a new LCR-Lincoln University FRST bid.
8. "Shatter-testing" of our multispecies baits, ofr targeting possums and rodents was completed and a report written and circulated to key clients and collaborators.
9. A report has been completed on the successful pen trials on a new humane pig poison co-authored with IA-CRC colleague Steven Lapidge and a report has been submitted to ARC. A report has been completed on pilot studies with Mthb inducers in rats for DoC.
10. A report/publication on diphacinone persistence was completed. Further comparative work is being planned to ensure our anticoagulant products are the least persistent possible.
11. A paper on non-target susceptibility in 4 birds to PAPP was finalised and submitted for publication into "Science for Conservation".
12. A joint Connovation-University of Auckland PhD student Daniel Canole was



awarded a Tertiary Education enterprise scholarship for his research. His thesis is entitled "The toxicokinetics of MtHb inducers".

REPORTS, PUBLICATIONS & PRESENTATIONS:

Charles T. Eason, Steven J. Lapidge, Steve Hix and Duncan MacMorran (2009) The effectiveness of an encapsulated formulation of a new pig toxin in pen trials. Connovation Report pp 10

Hix, S.; Durrett, T.; Shapiro, L.; MacMorran, D.; Ross, J.; Eason, C.T. (2009) Rodent deterrent for selectivity and safety of 215 possum bait. Connovation Report for AHB pp 12.

Eason, C.T.; Murphy, E.C.; Hix, S.; Henderson, R.J. and MacMorran, D (2009) Susceptibility of four bird species to para-aminopropiophenone (PAPP) Science for Conservation. "submitted & in press"

Eason, C.T.; Hix, S.; MacMorran, D.; Murphy, E.C (2009) The first stage of preliminary screening of candidate MtHb inducers as potential rodenticides including PAPP and sodium nitrite by oral gavage and in bait. Connovation Contract Report pp.8.

Eason, C.T.; Hix, S.; Frampton, C.; Arthur, D.; Murphy, E and Fairweather, A (2009) Diphacinone persistence in livestock. Connovation Report for DoC p.8

Lee, S.; Hix, S.; MacMorran, D.; Eason, C.T. (2009) Feratox field trials on dama wallabies. Connovation Report for DoC pp 10

Hix, S.; MacMorran, D.; Aylett, P.; Eason, C.T. (2009) Multispecies bait shatter test. Connovation Report pp 6.

Hix, S.; Lee, S.; MacMorran, D.; Eason, C.T. (2009) **Stage 1**. The effectiveness of low dose cholecalciferol bait for killing

captive possums. Connovation Report pp 6

Eason, C.T. ; Ogiev, S. ; Murphy, E. ; Broome, K.; Fairweather, A.(2009) Comparative pharmacokinetics and Residue Guidelines for Vertebrate Pesticides. Report for DoC pp 18.

Eason, C.T. ; Nicholls, L.; MacMorran, D. (2009) What's new from collaborative research and development. Presentation to Northern Biosecurity Institute at Unitec.