Supplementary table 1. Chlamydia vaccine trials in koalas

Antigen	Adjuvant	Dose	Koalas	Captive/Wild	Results	Reference
MOMP A, F & G	ISC	3	60 healthy male female	Wild	Decreased *C. pecorum* load and disease prevalence in vaccinated free-range koalas	Waugh C, Khan SA, Carver S, Hanger J, Loader J, Polkinghorne A, et al. A prototype recombinant-protein based *Chlamydia pecorum* vaccine results in reduced chlamydial burden and less clinical disease in free-ranging koalas (*Phascolarctos cinereus*). PLoS ONE. 2016;11(1). doi: 10.1371/journal.pone.0146934.
MOMP A, F & G	Not stated	3	20 Healthy male and female	Wild	Increased *C. pecorum* IgG neutralisation effect elicited by the vaccine	Khan SA, Polkinghorne A, Waugh C, Hanger J, Loader J, Beagley K, et al. Humoral immune responses in koalas (Phascolarctos cinereus) either naturally infected with Chlamydia pecorum or following administration of a recombinant chlamydial major outer membrane protein vaccine. Vaccine. 2016;34(6):775-82. doi: 10.1016/j.vaccine.2015.12.050.
MOMP, not stated	ISC, Tri-Adj	1, 3	15 healthy male & female	Wild	Establishes a basis for the use of a single dose vaccine that can induce comparable and enhanced immunological responses when compared to a three dose vaccine.	Khan SA, Desclozeaux M, Waugh C, Hanger J, Loader J, Gerdts V, et al. Antibody and cytokine responses of koalas (Phascolarctos cinereus) vaccinated with Recombinant Chlamydial Major Outer Membrane Protein (MOMP) with two different adjuvants. PLoS ONE. 2016;11(5). doi: 10.1371/journal.pone.0156094.
MOMP A, F & G	Tri-Adj	1	63 healthy male & female	Wild	Comparable results between antigens. However, some development of disease post vaccination (MOMP and PmpG)	Desclozeaux M, Robbins A, Jelocnik M, Khan SA, Hanger J, Gerdts V, et al. Immunization of a wild koala population with a recombinant Chlamydia pecorum Major Outer Membrane Protein (MOMP) or Polymorphic Membrane Protein (PMP) based vaccine: New insights into immune response, protection and clearance. PLoS ONE. 2017;12(6). doi: 10.1371/journal.pone.0178786.
MOMP peptides	Tri-Adj	1	69 healthy koalas (32 male/37 female)	Wild	Indicated that peptide vaccine produced cellular immune responses but poor humoral immune responses	Quigley BL, Timms P, Nyari S, McKay P, Hanger J, Phillips S. Reduction of Chlamydia pecorum and Koala Retrovirus subtype B expression in wild koalas vaccinated with novel peptide and peptide/recombinant protein formulations. Vaccine: X. 2023;14:100329.

Supplementary table 2. List of vaccine trials conducted in the Moreton Bay region utilising MOMP as the vaccine antigen and each specific vaccine efficacy

	Vaccine efficacy for incidence of disease				Vaccine Efficacy for death with chlamydial disease			
Vaccine group (Reference)	Healthy	Diseased	Incidence	Vaccine Efficacy	Alive	Died	Incidence	Vaccine efficacy
Unvaccinated	3022	268	0.081	NA	610	54	0.081	NA
Chlamydia peptide	151	11	0.068	16.64%	23	0	0.000	100%
Chlamydia/KoRV peptide	178	1	0.006	93.14%	22	0	0.000	100%
Peptide vaccine (16)	329	12	0.035	56.80%	45	0	0.000	100.00%
3 dose MOMP (14, 26)	312	11	0.034	58.19%	43	0	0.000	100%
1 dose MOMP (13, 14)	285	17	0.056	30.90%	44	5*	0.102	-25%
MOMP 2022#	106	2	0.019	77.27%	51	0	0.000	100%
1 dose MOMP combined	391	19	0.046	43.11%	95	5	0.050	39%

#Trial only conducted in the past year and includes 18 koalas that were previously vaccinated (boosted)

*Five vaccinated koalas died or euthanised with signs of chlamydial disease

Sex	Date Vaccinated	Date died	Days Vaccinated	Age at death	Disease
Male	12/1/2015	24/2/2015	43	7.05	Urinary/Renal
Female	10/4/2015	20/12/2015	254	5.92	Urinary and reproductive
Female	29/10/2014	17/3/2016	505	11.38	Reproductive only
Female	6/2/2015	10/7/2018	1250	14.56	Urinary/Renal
Female	16/2/2015	26/2/2019	1471	10.97	Urinary and reproductive