Chlamydia trachomatis and *Trichomonas vaginalis* Co-Infection in the Macaque Model

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INTRODUCTION

We have used the pigtailed macaque model to individually study chlamydia (bacteria) and trichomonal (parasite) infections. This co-infection model will be useful for testing the efficacy of developing multi-purpose technologies.

Estimated New Cases of Curable Sexually Transmitted Infections:
- *Trichomoniasis*
- *Gonorrhoea*
- *Chlamydia*
- *Syphilis*

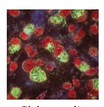
Parallels Between Macaques and Human Females

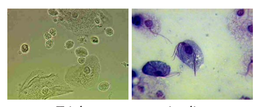
	Susceptibility		Mean Menstrual Cycle	Vaginal Epithelium Thickness	Vaginal pH	Microflora	
	Chlamydia trachomatis	*Trichomonas vaginalis*				Lactos	Concen-tration
	Yes	Yes	28 days	≤30 cell	5–8	Yes	10^5
	Yes	Yes	28 days	≤30 cell	≤4	Yes	10^7

OBJECTIVES

To increase utility of the macaque model and to explore infection potential and treatment effectiveness for both chlamydia and trichomoniasis, when delivered simultaneously to macaques.

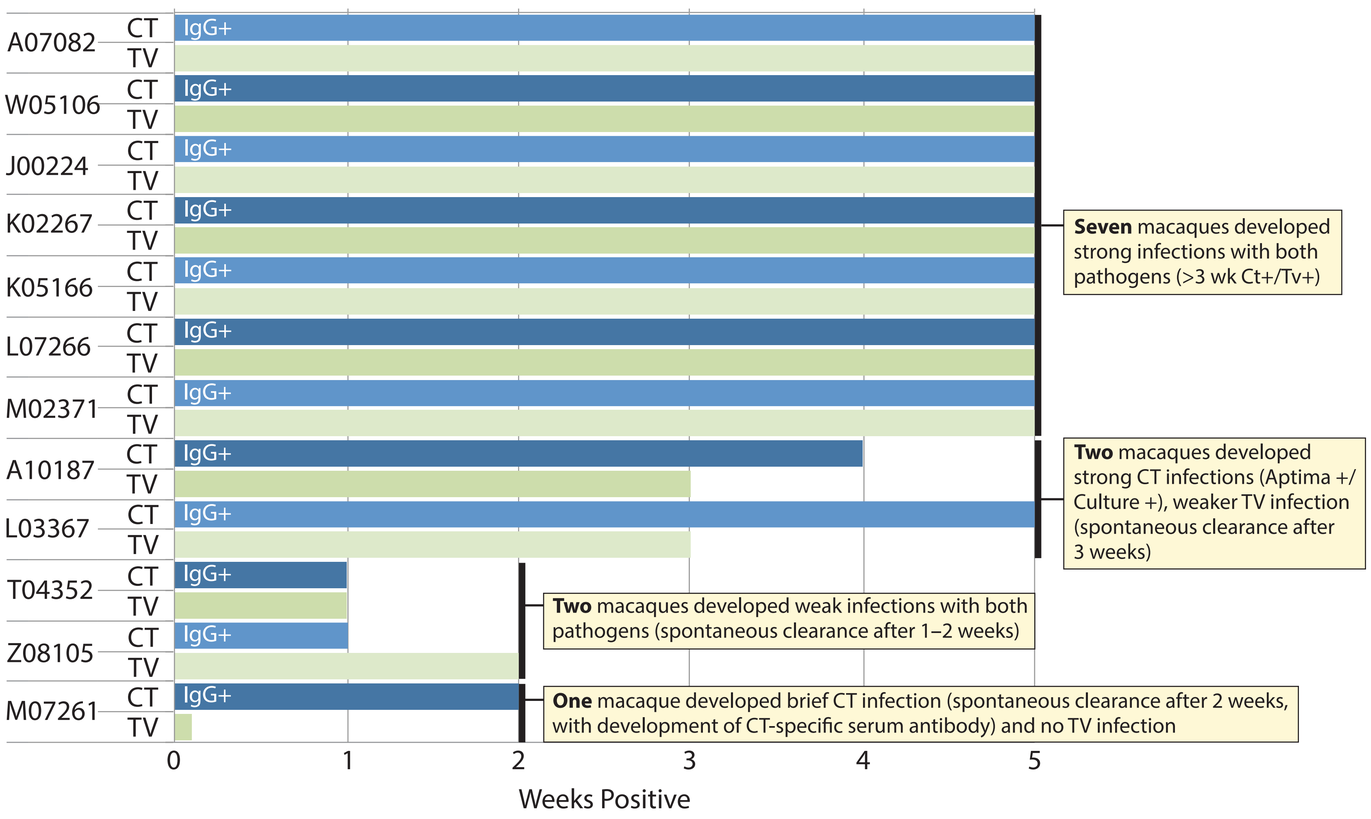
METHODS


Chlamydia trachomatis


Trichomonas vaginalis

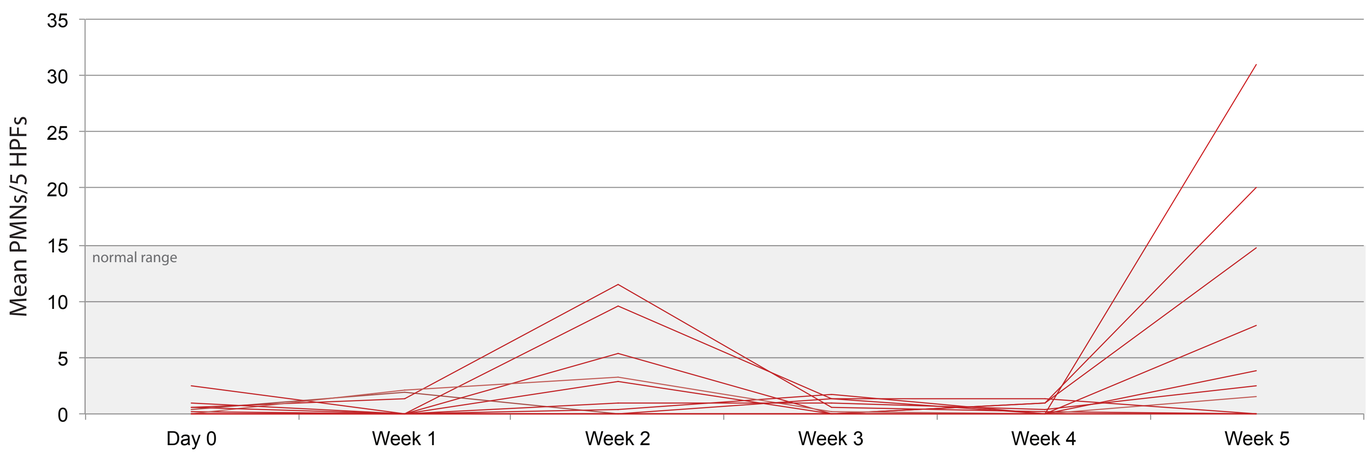
RESULTS

Detection of Ct and Tv Antigens and Ct Antibody

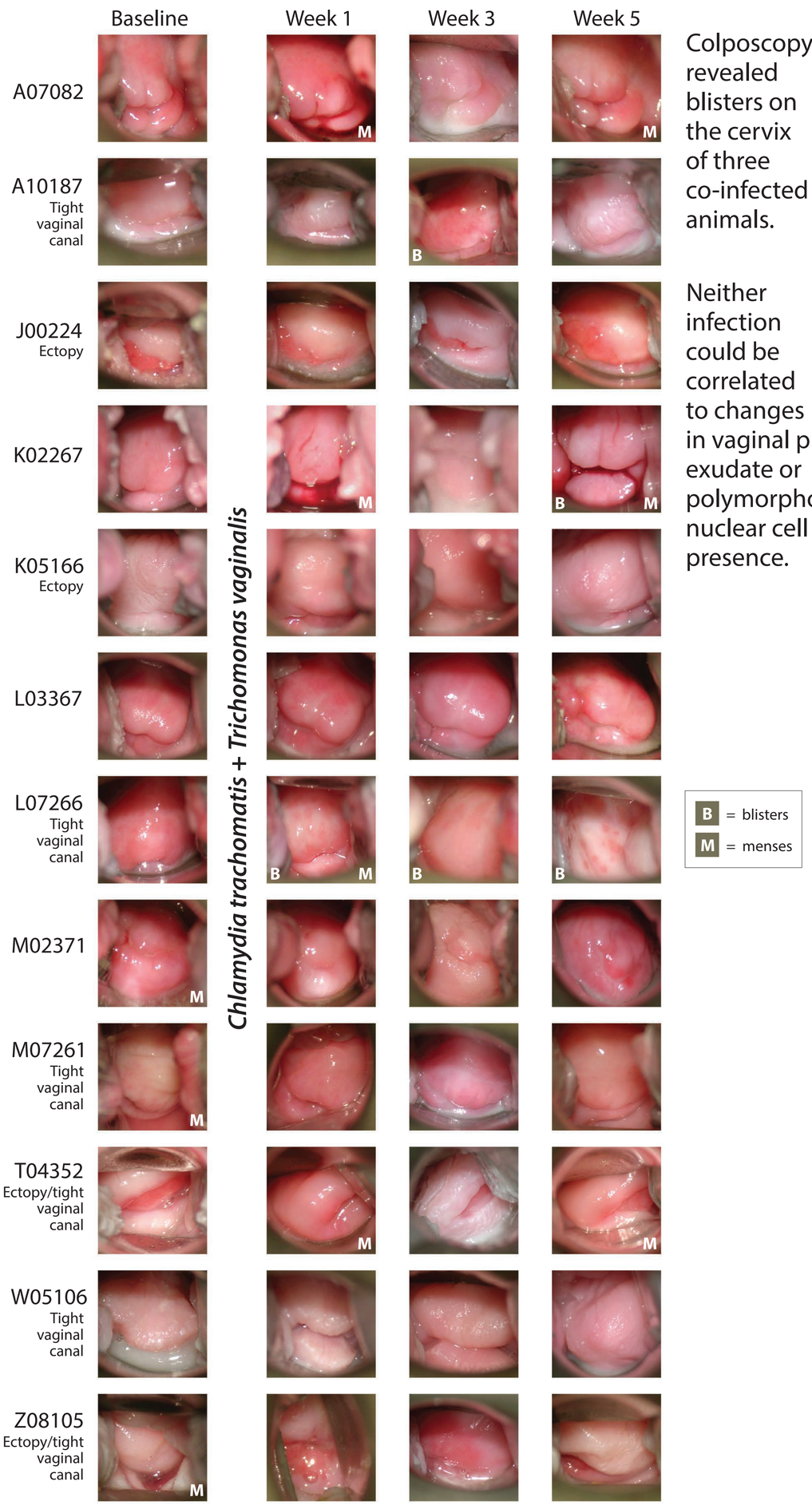


Vaginal pH Range

Vaginal PMNs *(mean value/5 HPFs)*



Representative Colposcopic Photos



Colposcopy revealed blisters on the cervix of three co-infected animals.

Neither infection could be correlated to changes in vaginal pH, exudate or polymorpho-nuclear cell presence.

CONCLUSIONS

1. We have demonstrated that co-infection with *Chlamydia trachomatis* and *Trichomonas vaginalis* is achievable in the pigtailed macaque model.
2. Infections are individually detectable and concurrent treatments are effective in clearing both organisms.

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