

## INFECTION

T CELL RESPONSE TO  
*C. TRACHOMATIS*

“  
CD8 T cells  
from women  
with infection  
limited to  
the cervix  
recognized 14  
proteins at  
an increased  
frequency”

Specific *Chlamydia trachomatis* antigens are recognized by CD4 and CD8 T cells and are associated with protective immunity against this infection. These antigens could be used to develop a chlamydial vaccine.

Investigators evaluated T cell responses from 58 women and grouped participants according to whether they had infection limited to their cervix or that extended into their endometrium and whether they tested positive or negative for *C. trachomatis* over the 12-month follow-up period.

Women with infection limited to their cervix had a significantly lower mean burden of bacteria, but time since last sexual encounter did not differ from women with infection extending to their endometrium, suggesting a possible role for an immune response in controlling infection. An increased median frequency of CD8 T cell responses, though not CD4 T cell responses, was observed for women with limited infection. CD8 T cells from women with infection limited to the cervix recognized 14 proteins at an increased frequency, three of which (CT461, CT511 and CT529) were amongst the 20 most immunodominant CD8 T cell proteins.

Women who did not contract infection during the follow-up period had a significantly greater mean frequency of CD4 T cell responses than those women who did become infected. A subset of 34 proteins were recognized at higher frequency by T cells from women negative for infection than from those who tested positive, of which four (CT038, CT128, CT130 and CT368) were in the top 20 antigens that were recognized by CD4 T cells.

These data could be used to help develop a chlamydial vaccine.

Louise Stone

**ORIGINAL ARTICLE** Russell, A. N. et al.  
Identification of *Chlamydia trachomatis* antigens recognized by T cells from highly exposed women who limit or resist genital tract infection. *J. Infect. Dis.* <http://dx.doi.org/10.1093/infdis/jiw485> (2016)