



Title	HUMORAL AND CELL-MEDIATED IMMUNITY IN THE ASCENDING MECHANISM OF CORYNEBACTERIUM RENALE FROM THE URINARY BLADDER INTO THE KIDNEYS IN MICE
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**HUMORAL AND CELL-MEDIATED IMMUNITY IN THE  
ASCENDING MECHANISM OF *CORYNEBACTERIUM*  
*RENALE* FROM THE URINARY BLADDER  
INTO THE KIDNEYS IN MICE**

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The ascending mechanisms of *C. renale* from the urinary bladder into the kidneys are unknown. In the present study question of whether or not immunity is concerned with the ascending of *C. renale* in the urinary passages was examined with the aid of a mouse model. *C. renale* was inoculated into the urinary bladder. The results were as follows :

1. Immunization of mice with killed organisms of *C. renale* did not prevent the ascending of organisms of *C. renale* from the urinary bladder into the kidneys, despite the fact that the antibodies against the organisms were sufficiently formed in the mice.

2. In the mice administered Cyclophosphamide, which is an immunosuppressant known to minimize humoral immunity, there was no increase or decrease of the ascending of *C. renale* observed.

3. Athymic (nu/nu) and control (nu/+) mice with *C. renale* inoculated into the urinary bladder did not show a significant difference ( $p=0.09$ ) in the rate of the ascending of organisms into the kidneys.

4. *C. renale* was inoculated into the urinary bladder of BCG-treated and control mice and showed no significant difference (0.09) in the rate of the ascending of the organisms into the kidneys in some BCG-treated mice, which were positive in producing serum antibody as a result of renal infection due to *C. renale*, recovery of the organisms from the kidneys was negative. Recovery was positive in the control mice. This may suggest that clearance from the kidneys of *C. renale* was more accelerated in the BCG-treated mice than in the control mice, which may be due to an increase in phagocytosis.

These results indicated that both humoral and cell-mediated immunity are not greatly involved in the ascending of *C. renale* from the urinary bladder into the kidneys.