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*primary studies - published RCT*

## **Effect of macrolides on in vivo ion transport across cystic fibrosis nasal epithelium.**

**Code:** PM15657462

**Year:** 2005 **Date:** 2005

**Author:** Barker PM

### **Study design (if review, criteria of inclusion for studies)**

12-month, randomized, double-blind crossover study

### **Participants**

18 human subjects with CF (17 DeltaF-508/DeltaF-508 and 1 DeltaF-508/other)

### **Interventions**

Clarithromycin and azithromycin were tested in mice, and clarithromycin in patients with CF. Baseline and post-treatment NPD was measured in two strains (C57Bl6 and BalbC) of CF transmembrane regulator "knockout" and littermate control mice, and in DeltaF508/DeltaF508 mice. In addition, NPD was measured in subjects with CF.

### **Outcome measures**

Nasal potential difference (NPD) measurements were used to test the effect of macrolides on airway epithelial ion (chloride, sodium) transport of CF mice and humans.

### **Main results**

Neither clarithromycin nor azithromycin affected ion transport characteristics of normal or CF nasal epithelium in either mouse or humans.

### **Authors' conclusions**

The apparent beneficial effects of macrolides on pulmonary outcome in CF are not mediated by their modulation of ion transport.

<http://dx.doi.org/10.1164/rccm.200311-1508OC>

### **See also**

Am J Respir Crit Care Med. 2005 Apr 15;171(8):868-71. Epub 2005 Jan 18.

### **Keywords**

Adolescent; Adult; Anti-Bacterial Agents; Azithromycin; Child; Clarithromycin; Macrolides; pharmacological\_intervention; Bacterial Infections; Respiratory Tract Infections; Respiratory Tract Diseases; Infection; Anti-Inflammatory Agents; Anti-Inflammatory Agents - excl Steroids;