# LETTERS TO THE EDITOR

**Re: Rosenfeld G, Bressler B. *Mycobacterium avium paratuberculosis* and the etiology of Crohn's disease: A review of the controversy from the clinician's perspective. Can J Gastroenterol 2010;24:619-24.**

*To the Editor:*

The recent review article by Rosenfeld and Bressler on *Mycobacterium avium paratuberculosis* (MAP) and Crohn's disease (CD) raises the level of awareness of the zoonotic potential of this enigmatic organism. There was an important omission in their review. A recent genomewide study from China (1) showed that a high proportion of leprosy patients have many of the same genetic mutations found in patients with CD including the *NOD2/CARD15* mutation. An accompanying editorial (2) suggested that these findings lend support to the mycobacterial theory in CD.

Rosenfeld and Bressler list the failure of antibiotic studies as evidence that MAP does not cause CD. Although there are anecdotal reports of clinical improvement when cattle with Johne's disease are treated with antibiotics, there is general acknowledgement that antibiotic therapy with current antibiotics fails to cure Johne's disease (3). Yet, no informed observer would, therefore, argue that MAP does not cause Johne's disease. The only correct conclusion that can be drawn from the controlled trials performed to date is that they did not cure CD. None of the studies, including the Australian trial (4), included MAP cultures or serological assays that would identify which patients were infected with MAP and whether the organism was eradicated by the antibiotics. Antibiotic trials using MAP cultures and serological assays and combinations of ciprofloxacin, rifabutin, clarithromycin, clofazimine and/or metronidazole, should be performed to establish the relationship of this organism to symptomatology. Open-label antibiotic trials and anecdotal reports show that some patients with CD and MAP infection are positive by MAP culture at the beginning of therapy and negative by MAP culture at the end of therapy, and their symptoms dramatically improve (5,6). While it is unlikely that most patients will have excellent results with currently available drugs, properly designed controlled trials would elucidate the role of MAP in CD. These studies should be funded by the National Institutes of Health (NIH); however, most researchers in this field will attest to the fact that NIH funding for MAP studies has too often been denied by the peer reviewers in this system.

The authors also list as evidence against MAP causation the fact that MAP has been isolated from a few individuals who do not suffer from CD. The veterinary literature describes cattle that are infected with MAP, which are asymptomatic shedders of the organism (7). A similar situation apparently prevails in human hosts.

The authors also list as evidence against MAP causation the fact that tuberculosis and *Mycobacterium avium intracellulare* infections flourish when patients receive corticosteroids and infliximab. It should be noted that the record on immune suppression in mycobacterial infections is inconsistent. Steroids have been used in the treatment of some cases of leprosy.

The authors conclude that "although the role of MAP in CD remains controversial and an area of considerable research, it is currently only of academic interest because there is no clinically useful test to identify the presence of the organism, and no evidence to support the use of antibiotics to eradicate it for the treatment of CD." If the authors were to view this problem from the patient perspective, they would instead conclude that far more research money and effort should be allocated by the NIH to fund properly designed antibiotic trials using MAP serology and cultures, and to find better tests for MAP detection and drugs that more effectively eradicate MAP infections.

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