Intravenous injection of killed Corynebacterium parvum 2 days before, or 8-10 days after, subcutaneous injection of viable cells of two isogenic mouse tumours (a spontaneous mammary carcinoma and a chemically induced fibrosarcoma) delayed the appearance of palpable tumours. Once palpable, tumours grew at the same rate in treated and control mice. This work was followed by clinical trials of C. parvum in patients with advanced cancer. Subcutaneous or intramuscular injection proved innocuous but, with a few reported exceptions, therapeutically ineffective. Intravenous infusion by slow drip was more effective but resulted in severe pyrexial reactions that were only partially controlled by aspirin. Intrapleural injection of C. parvum in patients with malignant pleural effusions often dried up the effusion, but did not significantly prolong survival.

In another randomized trial in patients with non-small cell operable lung cancer, there was no difference in the length of survival or the disease-free interval between those treated by surgery plus a placebo and those treated by surgery plus combined intrapleural and intravenous infusion of C. parvum. Since an earlier trial had shown that combining intravenous infusion of C. parvum alone with surgery actually shortened survival in similar patients, the authors accepted that intravenous injection alone might conceivably be beneficial, but no trial of this was reported.

Can the severe pyrexial reactions that follow intravenous injection of C. parvum somehow be prevented without loss of therapeutic effect? The development of "second generation" biological response modifiers has diverted attention from this question, but it merits serious study.