Mycoplasma is a genus of bacteria that lack a cell wall around their cell membrane. Without a cell wall, they are unaffected by many common antibiotics such as penicillin that target cell wall synthesis. They are the smallest bacterial cells yet discovered and can survive without oxygen. Mycoplasma pneumoniae is a known co-infection of Lyme disease. Mycoplasma fermentans has been associated with HIV, fibro, Gulf War Syndrome, and CFS.