

# Pamela Brown

**University of Missouri microbiologist  
Dr. Pamela Brown is uncovering how  
bacteria grow and take their shape.**

Brown investigates the structure of bacterial cell walls. To grow, the existing wall must be broken to allow insertion of new material. Brown studies how and why the molecular machinery that builds the wall is targeted to specific cell locations at certain times.

Brown carries out her research using a common soil bacterium that causes tumor-like growths in certain fruit trees. Scientists have harnessed the bacterium's ability to transfer its DNA into plant cells in order to purposefully transform plants. Brown's research may inform efforts to prevent plant disease as well as enhance biotechnology applications. Since the cell wall is required for most bacteria to survive, the research also may yield insights that could lead to new targets for antibiotics.

In addition to her research, Brown is a passionate science educator whose teaching excellence has been celebrated with the College of Arts and Science's Purple Chalk Teaching Award and the Provost's Outstanding Junior Faculty Teaching Award. She also shares science with local high schools, using antibiotic resistance as a model lab exercise to teach evolution.

Dr. Pamela Brown is an assistant professor of biological sciences in the College of Arts and Science with a courtesy appointment in the School of Medicine. She is a member of MU's Interdisciplinary Plant Group.

