

---

## **BIOGRAPHICAL SKETCH – Pamela A. Marshall**

Pamela A. Marshall is an accomplished yeast microbiologist, studying the yeast vacuole and calcium and phosphate homeostasis in this organelle. However, she is better known for her pedagogical and community service work in the K-12 arena and her work to support all students in their quest to excel. She has published numerous papers on pedagogy, is an Associate Editor for the *Journal of Microbiology and Biology Education* and a Co-Director for the Arizona State University (ASU) New College Center for Teaching Innovation and Excellence. She is a Fellow of the Arizona Nevada Academy of Science, and has won ASU awards for teaching, service, and undergraduate and colleague mentoring, as well as a Volunteer of the Year Award at a Title I eligible elementary school.

---

## **LECTURER'S PERSONAL STATEMENT – Pamela A. Marshall**

My entire philosophy can be summed up in one question, "What is in the best interest of the student?" Everything I do in my position at ASU is student-centered and focused on helping students at all levels succeed. I volunteer at a Title I eligible elementary school and have been instrumental in bringing high-level science to the students in the form of experiments (published in the ASM K-12 Curriculum Collection) and a large grant to build an outdoor classroom on the campus. At ASU, I am the Faculty Instructor for the TRIO SSS STEM Program, supporting low income, first generation, and/or disabled students in our STEM majors with workshops, advising, mentoring and classes.

My microbiology research focuses on the vacuole of the budding yeast *Saccharomyces* and its non-standard functions of calcium homeostasis and phosphate storage and accumulation. One would think that with its degradative nature, the vacuole would be like the lysosome. Indeed, the transport pathways to the organelle are similar, but yet this organelle has similar functions to the acidocalcisome in parasites as well. It's quite fascinating as the vacuole seems to have functions of both organelles and yet it also has unique functions. Calcium homeostasis in this yeast has been proposed to be a model for calcium storage and movement in higher eukaryotes, such as human cardiac cells, as well.