

## **Project Title: Computer Simulated Laboratory - Student Perceptions and Outcomes**

Investigator: Janelle M. Chiasera, The Ohio State University

**Study Overview:** This study focused on the design and development of a computer-driven blood gas laboratory for use in three university clinical laboratory science programs in the mid-west. The computer module was tested for accuracy and content by a panel of 5 experts in the field of clinical chemistry. The study sought to address the research question, “Under what conditions do distance learning opportunities lead to increased learning as defined by traditional and non-traditional measures, with results of specific application to Ohio’s higher education institutions?” Forty-two students from three university-based Clinical Laboratory Science programs were randomly assigned to two groups (A and B). Group A students (approximately 20) received the blood gas computer module while group B students (approximately 22) received the scheduled traditional wet laboratory established by that institution.

**Findings:** Post-test results and a qualitative survey revealed no significant differences between students using the computer simulation and those using the traditional wet laboratory. The only difference between the two groups was that the computer users felt they had more opportunities to assess their learning throughout the lab than the wet laboratory users.