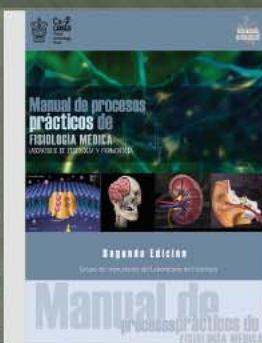


# STRATEGIES FOR REPLACEMENT IN THE MEDICAL PHYSIOLOGY LABORATORY OF CENTRO UNIVERSITARIO DE LA COSTA

Sergio Alberto Viruete Cisneros, M.D.\* Carlos Tomás Murillo Dueñas\*\*, Jessica Yolanda Castellanos Rodríguez\*\*, David Misael Lopez Rubio\*\*, Hugo Robles Gómez\*\*, Ofelia Sierra Guerrero\*\*.

\*Group Coordinator \*\* Laboratory instructor (Physiology and pathophysiology).  
Centro Universitario de la Costa, University of Guadalajara, Puerto Vallarta, Jalisco. Mexico.

The Centro Universitario de la Costa at the University of Guadalajara, Mexico, is approaching the formation of human resources in the health sciences by providing an integrated approach that includes human development. This assignment is offered to medical and nursing students as an elective project. It has led to a search for alternatives to the use of animals in the teaching of medical physiology.



In 2008 we acquired the Biopac Student Lab, which has allowed us to perform self-experimentation practical classes, with the student as a volunteer. This allows us to observe the most common physiological variables and to strengthen learning in the physiology laboratory.

We have developed a group of outstanding students which has created a physiology manual with detailed protocols to implement different practical activities in the laboratory.



In 2011, with support from InterNICHE, we received a new Advanced Biopac Student Lab and an upgrade to our existing apparatus. This is now enabling 100% replacement of animal experiments in the laboratory. We are planning to use it in other departments of the Centro Universitario de la Costa and at other campuses in the university network, with potential further replacement.



THE COMBINATION OF A PROGRAM OF HUMAN DEVELOPMENT WITH THE OPPORTUNITY OF USING ALTERNATIVES IN MEDICAL EDUCATION WILL SUPPORT THE FORMATION OF HUMAN RESOURCES IN THE HEALTH SCIENCES.

