Biologist
Dr. Manuel Ares is a professor of molecular, cell, and developmental biology at the University of California (UC)–Santa Cruz.

His research focuses on RNA processing and the structure and function of RNA, with special attention to the role of RNA processing in genome function and evolution.

After receiving a B.S. in biology at Cornell University, Dr. Ares earned a Ph.D. (1982) from UC–San Diego, where he was a graduate student in the lab of Stephen H. Howell; his thesis was on cell cycle-regulated gene expression in Chlamydomonas. He went on to do a postdoc at Yale University School of Medicine with Alan Weiner, working on the transcription of human small nuclear RNA (snRNA) genes.

During this time, he became interested in RNA processing and also began to work on splicing. Dr. Ares was hired as an assistant professor in the biology department at UC–Santa Cruz in 1987, became a full professor in 1998, and was the founding chairman of the Department of Molecular, Cell, and Developmental Biology at UC–Santa Cruz. He served as chairman from 2000 to 2002.

Ares always felt he learned more in the lab than in the classroom. That's why he wants to expose more students to a real research environment. "If people who have not thought of themselves as researchers can be part of a research team, they end up seeing themselves as scientists," says Ares.

To encourage the development of scientist-teachers, he'll recruit undergraduates, (mainly juniors and seniors) over the course of three years to participate in a research group that conducts genomic studies of splicing in humans and Plasmodium spp., the causative agent of malaria. He has two goals in mind. The first, to create a database of validated alternative splicing events in vertebrate organisms, with a special focus on humans. The second goal is to annotate the introns in the Plasmodium genome by using bioinformatic and molecular techniques. The group will develop a database that will be made publicly available on the Web.

In addition to gaining experience in the research lab, including learning how to use sophisticated instrumentation and technology, students will have formal contact with experts in the field, including faculty and post- and predoctoral fellows.

Most recently, Dr. Ares has been applying microarray technology to issues of RNA processing. Future research will focus on understanding on a genome-wide level how the RNA processing
machinery interprets genomic information and how these processes have contributed to the evolution of eukaryotes and eukaryotic genomes.

Dr. Ares has authored many articles, holds two U.S. patents, and has been a reviewer for study sections of the National Institutes of Health. He also serves on the editorial boards of the journals Gene Expression, Molecular and Cellular Biology, and RNA and has been a reviewer for many other scientific journals.

*Photo Courtesy of University of California–Santa Cruz*