

**Francisco P. Chavez**  
Monterey Bay Aquarium Research Institute (MBARI)  
7700 Sandholdt Road  
Moss Landing, CA 95039-9644  
Tel: (831) 775-1709; Fax: (831) 775-1620

## **Education**

1987 Ph.D. Botany, Duke University  
1977 B.S. Oceanography, Humboldt State University

## **Research Interests**

Biology and chemistry of the ocean in relation to natural climate variability and global change.  
Global carbon cycle. Instrumentation and systems for long-term ocean observing. Satellite remote sensing.

## **Employment History**

2000-present	Senior Scientist , MBARI
2000-present	Faculty (courtesy), Stanford University
1996-2000	Associate Scientist (III), MBARI
1992-1996	Associate Scientist (II), MBARI
1990-present	Research Associate, University of California, Santa Cruz
1987-1992	Assistant Scientist, MBARI

## **Professional Service/Activities**

Member - JGOFS time series oversight committee  
Reviewer - Chilean Oceanographic Program, Peruvian Fisheries Program  
NSF Alan Waterman award committee  
NSF Advisory Committee for the Geoscience Directorate  
Board of Directors - Center for Integrated Marine Technologies  
Science Team - Global Eulerian Observations

## **Publications**

- Barber, R.T. and F.P. Chavez. 1983. Biological consequences of El Niño. *Science* 222:1203-1210.
- Chavez, F.P., R.T. Barber and H. Soldi S. 1984. Propagated temperature changes during onset and recovery of the 1982-83 El Niño. *Nature* 309:47-49.
- Barber, R.T. and F.P. Chavez. 1986. Ocean variability in relation to living resources during the 1982-83 El Niño. *Nature* 319:279-285.
- Chavez, F.P. (1987). El Niño y la Oscilación del Sur. *Investigación y Ciencia* (Spanish edition of Scientific American) 128:46-55.

- Martin, J.H. et al. 1994. Testing the iron hypothesis in ecosystems of the equatorial Pacific Ocean. *Nature* 371:123-129.
- Paytan, A., M. Kastner and F.P. Chavez. 1996. Glacial to interglacial fluctuations in productivity in the Equatorial Pacific as indicated by marine barite. *Science* 274:1355-1377.
- Coale, K.H et al. 1996. A massive phytoplankton bloom induced by an ecosystem-scale iron fertilization experiment in the equatorial Pacific Ocean. *Nature* 383:495-501.
- Johnson, K.S., F.P. Chavez and G.E. Friederich. 1999. Continental shelf sediment as a primary source of iron for coastal phytoplankton. *Nature* 398:697-700.
- Chavez, F.P., P.G. Strutton, G.E. Friederich, R.A. Feely, G.A. Feldman, D. Foley and M.J. McPhaden. 1999. Biological and chemical response of the equatorial Pacific Ocean to the 1997-1998 El Niño. *Science* 286:2126-2131.
- Chavez, F.P., J.P. Ryan, S. Lluch-Cota and M. Iquen C. 2003. From anchovies to sardines and back-Multidecadal change in the Pacific Ocean. *Science* 299:217-221.
- Chavez, F.P. and J.R. Toggweiler. 1995. Physical estimates of global new production: the upwelling contribution, In *Upwelling in the Ocean: Modern Processes and Ancient Records*, Summerhayes, C.P., Emeis, K.C., Angel, M.V., Smith, R.L., and Zeitzschel, B., (eds.), p. 313-320, J. Wiley & Sons, Chichester.
- Chavez, F.P., J.T. Pennington, R. Herlien, H. Jannasch, G. Thurmond and G.E. Friederich. 1997. Moorings and drifters for real-time interdisciplinary oceanography. *Journal of Atmospheric and Oceanic Technology* 14:1199-1211.
- Chavez, F.P. and C. Collins, eds. 1998. *Studies of the California Current System, Deep-Sea Research II*, Volume 45.
- Olivieri, R.O. and F.P. Chavez. 2000. A model of plankton dynamics for the coastal upwelling system of Monterey Bay, California. *Deep-Sea Research II* 47:1077-1105.
- Pennington, J.T. and F.P. Chavez. 2000. Seasonal fluctuations of temperature, salinity, nitrate, chlorophyll and primary production at station H3/M1 over 1989-1996 in Monterey Bay, California. *Deep-Sea Research II* 47:947-973.
- Chavez, F.P. and C. Collins, eds. 2000. *Studies of the California Current System Part 2, Deep-Sea Research II* 47:5-6.
- Johnson, K.S., F.P. Chavez, V.A. Elrod, S.E. Fitzwater, J.T. Pennington, K.R. Buck and P.M. Walz. 2001. The annual cycle of iron and the biological response in central California coastal waters. *Geophysical Research Letters* 28:1247-1250.
- Johnson, K.S., C.K. Paull, J.P. Barry and F.P. Chavez. 2001. A decadal record of underflows from a coastal river into the deep sea. *Geology* 29:1019-1022.
- Friederich, G., P. Walz, M. Burczynski and F.P. Chavez. 2002. Inorganic Carbon in the Central California Upwelling System During the 1997-1999 El Niño -La Niña Event. *Progress in Oceanography* 54:185-204.
- Chavez, F.P., C.A. Collins, A. Huyer and D. Mackas (eds). 2002. *El Niño along the west coast of North America. Progress in Oceanography* 54:1-6.
- Collins, C.A. J.T. Pennington, C.G. Castro, T.A. Rago and F.P. Chavez. 2003. The California Current system off Monterey, California: Physical and biological coupling. *Deep-Sea Research II*. doi:10.1016/S0967-0645(03)00134-6