

Expert on Genetics of Algae Joins UC San Diego

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Kim McDonald

A renowned expert on the genetics of algae who heads a regional consortium seeking to develop new biofuels from algae has joined the faculty of the University of California, San Diego.

Stephen Mayfield, who since 1987 had been a professor of cell biology and associate dean of graduate studies at The Scripps Research Institute, or TSRI, is now a professor of biology in UC San Diego's Division of Biological Sciences. He also holds the John Dove Isaacs Chair of Natural Philosophy at UCSD.

"The Biological Sciences faculty and I are delighted to welcome a scientist of the caliber of Dr. Mayfield to our faculty," said Steve Kay, dean of the Division of Biological Sciences. "His leadership and innovation in algae molecular biology and experience in running a world class graduate program will further strengthen the division."

Mayfield was a co-founder with Kay of the San Diego Center for Algae Biotechnology, or SD-CAB, a regional partnership of research institutions, companies and governmental organizations seeking to develop innovative ways to turn algae into biofuels.

As the current director of SD-CAB, Mayfield says his move from TSRI to UC San Diego made sense because of the large number of world renowned plant geneticists at the university and the recent arrival of a critical mass of biologists whose basic research could be applied to the problems of developing biofuels from algae. In addition to Kay, who moved from TSRI to UCSD two years ago, these scientists include Susan Golden and James Golden, professors of biology who were recruited from Texas A&M University, and Steve Briggs, a professor of biology recruited from the San Diego biotech company Diversa.

"I am really excited to join the distinguished faculty at UCSD," said Mayfield. "Together with our colleagues at UCSD's Scripps Institution of Oceanography, we have assembled one of the world's leading centers for algae biotechnology research, and I am very much looking forward to working with this team to make algae biofuels a reality."

An avid surfer, Mayfield received his doctorate from the University of California at Berkeley in 1984. His research has focused on understanding the genetics of the green algae *Chlamydomonas reinhardtii* and on developing ways to produce new therapeutic proteins and biofuel molecules from algae.

His early research on the genetics of *Chlamydomonas* has made the alga the primary laboratory organism for the study of the genetics of photosynthesis and chloroplast function-studies that allowed algae to be used as an industrial organism. Recent studies from his laboratory have shown the potential of engineering algae for the production of superior biofuel molecules as a source of renewal energy.

Mayfield was a scientific founder of Rincon Pharmaceuticals, a San Diego based company developing algae as a more efficient

and less costly source for generating therapeutic proteins. He is also a scientific founder of Sapphire Energy, a company developing biofuel production by metabolic engineering of algae and photosynthetic bacteria, and the Chairman of the Scientific Advisory Boards of Sapphire Energy.

More information on SD-CAB is available at: <http://algae.ucsd.edu/>

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