Stephen Mayfield

Director, California Center for Algae Biotechnology Co-director, Food & Fuel for the 21st Century Professor at UC San Diego

La Jolla, CA, US

Stephen Mayfield's research analyses the structures and proteins in algae.

Biography

Mayfield is director of the California Center for Algae Biotechnology (Cal-CAB), director of Food & Fuel for the 21st Century (FF21), and professor of molecular biology at UC San Diego. His research focuses on the molecular genetics of green algae, algae as food and feed and renewable polymers from algae including surfboards and flip flops. He also studies recombinant production of therapeutic proteins and biofuel molecules using algae as a production platform. First to achieve transformation of the C. reinhardtii nuclear genome, Mayfield's work allowed this algae to become the dominant genetic organisms for studying photosynthesis and gene function. Mayfield's lab identified mechanisms of chloroplast gene expression allowing for development of recombinant protein expression in algal chloroplast, and was first to show high levels of recombinant protein expression in algae. He is the principal investigator for the DOE funded Center for Algae Biotechnology Commercialization (CAB-Comm) and CEC funded California Initiative for Large Molecule Sustainable Fuels (CILMSF). Mayfield was also a scientific founder of Rincon Pharmaceutical, Sapphire Energy and Triton Algae Innovations, and is the head of Sapphire?s Scientific Advisory Board and the Chief Science Officer at Triton.

Areas of Expertise

Pharmaceuticals, Biofuel, Algae, Molecular Genetics, Protein Biochemistry

Education

UC Berkeley
Ph.D. Genetics

California Polytechnic University
B.S. Biochemistry and Plant Biology