PRODUCTION OF OIL IN MICROORGANISMS

ABSTRACT

The invention provides methods and compositions useful for the production of oil, fuels, oleochemicals, and other compounds in microorgansims. In particular, the invention provides oil-bearing microorganisms and methods of low cost cultivation of such microorganisms. The invention also provides microbial cells containing exogenous genes encoding, for example, a lipase, sucrose transporter, sucrose invertase, fructokinase, a polysaccharide-degrading enzyme, fatty acyl-ACP thioesterase, fatty acyl-CoA/aldehyde reductase, fatty acyl-CoA reductase, fatty aldehyde reductase, fatty aldehyde decarbonylase, and/or an acyl carrier protein. The invention also includes methods of manufacturing transportation fuels such as renewable diesel, biodiesel, and renewable jet fuel.

FIG. 1