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(71) Applicant (for all designated States except US): **SO-LAZYME, INC.** [US/US]; 225 Gateway Boulevard, South San Francisco, California 94080 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FRANKLIN, Scott** [US/US]; 225 Gateway Boulevard, South San Francisco, California 94080 (US). **SOMANCHI, Aravind** [IN/US]; 225 Gateway Boulevard, South San Francisco, California 94080 (US). **ESPINA, Karen** [US/US]; 225 Gateway Boulevard, South San Francisco, California 94080 (US). **RUDEENKO, George** [UA/US]; 225 Gateway Boulevard, South San Francisco, California 94080 (US). **CHUA, Penelope** [US/US]; 225 Gateway Boulevard, South San Francisco, California 94080 (US).

(74) Agents: **TERMES, Lance A.** et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, California 94111 (US).

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(54) Title: PRODUCTION OF TAILORED OILS IN HETEROTROPHIC MICROORGANISMS

(57) Abstract: Methods and compositions for the production of oil, fuels, oleochemicals, and other compounds in Prototheca are provided, including oil-bearing microorganisms and methods of low cost cultivation of such microorganisms. Prototheca cells containing exogenous genes encoding, for example, a lipase, a sucrose transporter, a sucrose invertase, a fructokinase, a polysaccharide-degrading enzyme, a fatty acyl-ACP thioesterase, a fatty acyl-CoA/aldehyde reductase, a fatty acyl-CoA reductase, a fatty aldehyde reductase, a fatty aldehyde decarboxylase, and/or an acyl carrier protein are useful in manufacturing transportation fuels such as renewable diesel, biodiesel, and renewable jet fuel.



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