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(71) Applicant: **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; Office of Technology Transfer, 1111 Franklin Street, 12th Floor, Oakland, California 94607-5200 (US).

(72) Inventors: **SIEGEL, Justin B.**; c/o The Regents of the University of California, 1111 Franklin Street, 12th Floor, Oakland, California 94607-5200 (US). **ARREDONDO, Augustine**; c/o The Regents of the University of California, 1111 Franklin Street, 12th Floor, Oakland, California 94607-5200 (US).

(74) Agent: **HINSCH, Matthew E.** et al.; 1100 Peachtree Street, Suite 2800, Mailstop: IP Docketing - 22, Atlanta, Georgia 30309 (US).

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(54) Title: ENZYMES FOR OXIDIZING BETA-HYDROXYBUTYRATE (BHB), TEST STRIPS, AND SENSORS OF USING THE SAME

(57) Abstract: The present disclosure relates to enzymes capable of oxidizing betahydroxybutyrate (BHB). In aspects, the enzymes are engineered to optimize BHB activity. Engineered enzymes including amino acid substitutions, truncations, and sequence deletions are further provided. The disclosure further provides for use of enzymes described herein, for example, in test strips, BHB sensors, devices, and systems for detecting and measuring BHB concentration.

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