High-throughput in vivo screening platform for chemical and genetic modulators of Apoliporpotein-B

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Technology description

Unmet Need

Rapid and sensitive screening platform to develop diagnostic tests for metabolic diseases.

Technology Overview

Elevated serum Apolipoprotein-B (ApoB) may represent a unifying risk factor underlying many of the world’ s most prevalent metabolic diseases. ApoB levels independently predict incidence of diabetes, metabolic syndrome, and cardiovascular disease even after adjusting for confounding variables The technology is an in-vivo high-throughput screening assay for modulators of ApoB in the larval zebrafish. For this purpose we have engineered the first ever transgenic zebrafish carrying a luciferase reporter fused to ApoB, which enables rapid and sensitive reporter quantification in 96-well plate format.

Results indicaqte that the assay is not disruptive to zebrafish metabolism, is responsive to physiological and pharmaceutical treatments, is statistically robust, and compatible with existing automated high-throughput screening platforms.

Institution

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