Isolation Bio's Prospector® system featured in pivotal gut microbiome study recently published in Nature Communications

Prospector high-throughput cultivation platform instrumental in Nature Communications paper that revealed the role of gut bacteria in fat metabolism

Isolation Bio

SAN CARLOS, CA, USA, August 2, 2023 /EINPresswire.com/ -- Isolation Bio's high-throughput bacterial isolation and cultivation Prospector® platform was instrumental to research published in Nature Communications that revealed the role of Turicibacter bacteria in host fat metabolism. In this pioneering study, Dr. Jonathan Lynch, a former post-doctoral scientist in Dr. Elaine Hsiao's lab at UCLA, showed Turicibacter isolates differentially alter the metabolism of bile acids, lipids, and cholesterol in mammalian hosts, providing data to understand the mechanism for gut microbiota's role in obesity.

Previous data show that bacterial species like Turicibacter sanguinis are prominent within the mammalian gut microbiota and correlate with alterations in dietary fat and body weight. However, studies into the mechanisms by which T. sanguinis influences host physiology are limited by the extensive time, effort, and resources required for isolating and cultivating this low abundance, anaerobic species using traditional microbiological methods. Instead, the Isolation Bio team who are co-authors on the study used the Prospector, a high throughput automation and live-cell isolation and cultivation array technology to expedite the generation of a Turicibacter isolate bank.

"From just one human fecal sample, the Prospector platform was able to expand our culture collection of T. sanguinis isolates within a time frame that simply would not have been feasible with the classical culture-and-screen method," stated Dr. Lynch, currently an Assistant Professor at Johns Hopkins University. "These isolates helped us gain an understanding of the mechanisms connecting members of the diverse Turicibacter genus to host physiology that will move us one step closer to discovering how these bacteria shape human health."
About Isolation Bio

About Isolation Bio

Isolation Bio Inc, a privately held company headquartered in the San Francisco Bay area, is a leading developer of a next-generation cultivation platform for microbiome research and microbial product development, addressing high-impact markets including human health, agriculture, environmental science, and microbial products for industrial use. Until now, advances in these areas have been limited by century-old tools that have low productivity and do not scale.

Isolation Bio's Prospector® platform streamlines and automates the most difficult and labor-intensive aspects of microbiology to enable scalable cultivation and analysis of microorganisms. The core technology is the Prospector® discovery platform that integrates a highly dense array of nanoscale cultivation chambers that can grow thousands of microcolonies in parallel with a bench-top system that automates the cultivation workflow through software-driven imaging, picking, and transfer of single isolates into standard multi-well plates for downstream analysis. For more information, please visit isolationbio.com.

Media contact
Name: Surekha Karudapuram
Email: surekha.karudapuram@isolationbio.com

Surekha Karudapuram
Isolation Bio
+1 650-274-2654
email us here
Visit us on social media:
Twitter
LinkedIn
