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A better path to biomarker validation: Using MALDI mass spec

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In industry's quest to develop novel, targeted therapies and diagnostics, the majority of potential new products stall out in the discovery phase, never reaching the patients who could benefit. Circulating proteins provide a wealth of information, however today's standard technologies for analyzing the serum proteome come with many drawbacks, particularly in translating biomarker knowledge into clinically useful tools.

The solution can be found using a proven technique that offers practical advantages to customary methods of extracting relevant information from patients' blood: MALDI-ToF mass spectrometry (MALDI). The MALDI platform can discover unique protein signatures that identify patients likely to benefit from specific therapies, and it does not require companies to shift platforms as they move from discovery to development and commercialization.

Illustrating how this can be done, Biodesix Inc. of Boulder, Colo., shares insights as one of the first companies to successfully develop MALDI into a reproducible, high-throughput tool to routinely measure protein abundance from serum samples, independent of the existence of immunoassays. The company, founded on a mission of personalizing medicine, has commercialized a serum proteomic test called VeriStrat that's capable of predicting whether patients with advanced lung-cancer will respond to the targeted second-line therapy, erlotinib (Tarceva®).

In this presentation, the audience will learn about the MALDI platform approach and how it can increase their clinical success by coordinating biomarker discovery and subsequent companion diagnostic development with drug development. This novel and practical strategy for biomarker-based diagnostic development can play a central role in the creation and commercialization of new personalized therapies.

Biography

Mark Duncan is presently the Professor of Medicine at the University of Colorado and also holds the position of Director of Academic Collaborations at Biodesix, Inc.,

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