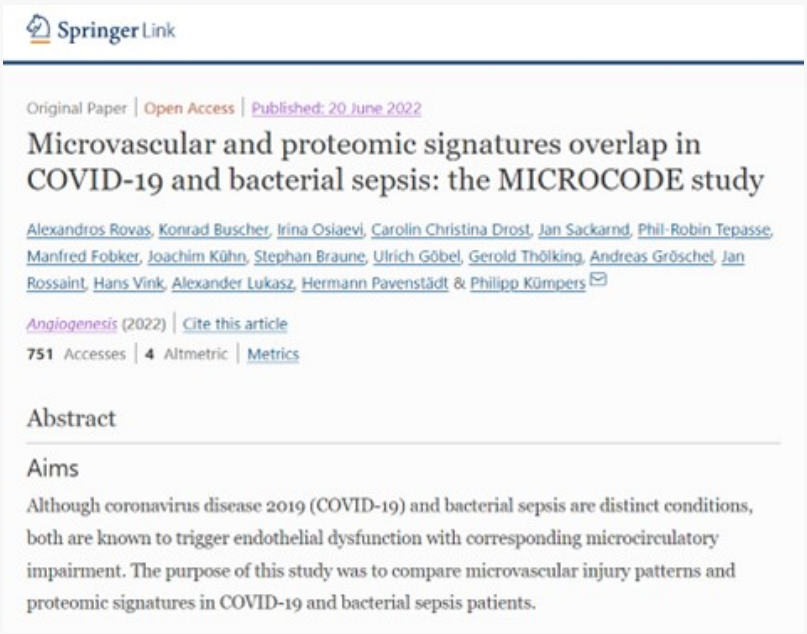
BioRegenx Announces COVID-19 and Bacterial Sepsis Study Using Microvascular Health Solutions' Testing Device GlycoCheck

CHATTANOOGA, TN, USA, July 26, 2022 /EINPresswire.com/ -- BioRegenx subsidiary Microvascular Health Solutions (MVHS) announces that a new peer-reviewed study using GlycoCheck, exclusively distributed worldwide by MVHS, has been published. The study, published in Angiogenesis, is titled Microvascular and proteomic signatures overlap in COVID-19 and bacterial sepsis: the MICROCODE study. The study was conducted at the University Hospital Münster in Germany. One of the authors of the study was Hans Vink, PhD, Chief Science Officer of Microvascular Health Solutions.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Microvascular and proteomic signatures overlap in COVID-19 and bacterial sepsis: the MICROCODE study

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Abstract

Aims

Although coronavirus disease 2019 (COVID-19) and bacterial sepsis are distinct conditions, both are known to trigger endothelial dysfunction with corresponding microcirculatory impairment. The purpose of this study was to compare microvascular injury patterns and proteomic signatures in COVID-19 and bacterial sepsis patients.

Microvascular Study

GlycoCheck Capivision Camera

This multi-center, observational study included 22 hospitalized adult COVID-19 patients, 43 hospitalized bacterial sepsis patients, and 10 healthy controls from 4 hospitals. Microcirculation and glycocalyx dimensions were quantified using the GlycoCheck system. Plasma proteins were measured using targeted proteomics (Olink). Coregulation and cluster analysis of plasma proteins was performed using a training-set and confirmed in a test-set. An independent external cohort of 219 COVID-19 patients was used for validation and outcome analysis.

Microcirculation and plasma proteome analysis found substantial overlap between COVID-19

and bacterial sepsis. Severity, but not disease entity explained most data variation. Unsupervised correlation analysis of 184 cardiovascular and inflammatory proteins with microvascular and glycocalyx parameters of the GlycoCheck system, identified two main coregulated plasma protein signatures in both diseases that strictly counteract each other. They were associated with microvascular dysfunction and several established markers of clinical severity. The signatures were used to derive new composite biomarkers of microvascular injury that allow to predict 28-day mortality or/and intubation (area under the curve 0.90, $p < 0.0001$) in COVID-19.

Conclusion

Data from the study implies a common biological host response of microvascular injury in both bacterial sepsis and COVID-19. A distinct plasma signature correlates with endothelial health and improved outcomes, while a counteracting response is associated with glycocalyx breakdown and high mortality. Microvascular health biomarkers are powerful predictors of clinical outcomes.

Despite some limitations the data clearly indicate that COVID-19 and bacterial sepsis share common proteomic signatures and features of microvascular damage. Integrating multi-omic data in clinical studies is a promising approach to decipher systemic host responses and microvascular damage, and develop new diagnostic and therapeutic concepts in inflammatory disease.

COVID-19 and Sepsis Double-Blind Placebo Controlled Studies

Double-blind placebo controlled research studies are both starting soon, and already underway, to evaluate how Endocalyx Pro™ works to improve patient health in both COVID-19 and Sepsis. Read about COVID-19 studies and the proposed Sepsis study at Microvascular.com.

About BioRegenx

BioRegenx, Inc., (BioRegenx.com) a holding company, consists of Microvascular Health Solutions, LLC, My Body Rx, LLC, and NuLife Sciences, Inc. BioRegenx and its subsidiaries combine the patented intellectual property of the breakthrough GlycoCheck medical testing device, the patented nutraceutical Endocalyx Pro, additional synergistic dietary supplement products sold under the My Body Rx brand, and a customer base of medical professionals and brand partners throughout North America.

Safe Harbor

This press release contains forward-looking information within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including statements regarding potential sales, the success of the company's business, as well as statements that include the word believe or similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause the actual results, performance, or achievements of BioRegenx, Inc. to differ materially from those implied or expressed by such forward-looking statements. This press release speaks as of the date first set forth above, and BioRegenx, Inc. assumes no responsibility to update the information included herein for events occurring after the date hereof. Actual results could differ materially from those anticipated due to factors such as the lack of capital, timely development of products, inability to deliver products when ordered, inability of potential customers to pay for ordered products, and political and economic risks inherent in international trade.

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